

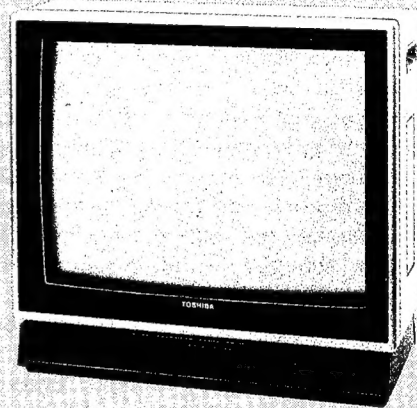
TOSHIBA

COLOR TELEVISION

CZ2094: CX2094C

(TAC8470)

(TAC8475)



SPECIFICATIONS

INPUT POWER RATING:	99 watts (average), 120 volts AC, 60Hz
ANTENNA INPUT IMPEDANCE:	300 ohm balanced type for UHF 75 ohm unbalanced type for VHF
RECEIVING CHANNELS:	Any of 12 VHF channels channels 2 to 13 Any of 70 UHF channels channels 14 to 83 CATV channels Mid-band, A2, A1, A to I Super-band J-W Hyper-band AA-ZZ-BBB
INTERMEDIATE FREQUENCIES:	Picture I-F carrier frequency 45.75 MHz Sound I-F carrier frequency 41.25 MHz Color sub-carrier frequency 42.17 MHz
CHASSIS CONSTRUCTION:	IC-Solid State Chassis
PICTURE TUBE:	20 inches, A51JAR60X(MW), 192 sq. inches of viewable area, Full Square Face
SOUND OUTPUT:	5 watts × 2 (Undistorted, Maximum)
SPEAKER:	2.0" × 3.5" Flat, 2 pcs
CABINET:	Plastic, Table Type
DIMENSION:	Height 18-21/32 inches Width 19-11/16 inches Depth 18-25/64 inches
WEIGHT (NET):	61.8 lbs
AUX. TERMINAL:	Headphone Jack, AV IN/OUT terminal (on back), RGB-IN terminal (8P, 21P)
FEATURES:	Frequency synthesized tuning system with CATV reception (Mid-, Super- and Hyper-band), Digital video processing system (Picture In Picture), Multi Channel TV Sound reception

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 28.8 kV at zero beam current (minimum brightness) under a 120V AC power source. The high voltage must not, under any circumstances, exceed 30.5 kV.
Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure on page 10 of this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
- 2 This receiver is equipped with a Fail Safe (FS) circuit

which prevents the receiver from producing an excessively high voltage even if the B+ voltage increases abnormally. Each time the receiver is serviced, the FS circuit must be checked to determine that the circuit is properly functioning, following the FS CIRCUIT CHECK procedure on page 10 of this manual.

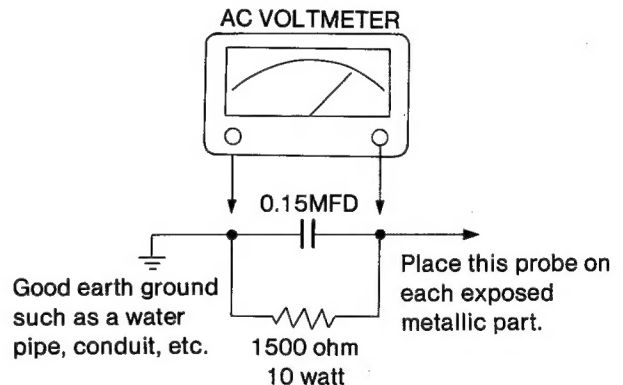
3. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
4. Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING: Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. **Since the chassis of this receiver has hazardous potential to ground whenever the receiver is plugged in (floating chassis), an isolation transformer should be used during any dynamic service to avoid possible shock hazard.**
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
4. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner:

Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 mfd, AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 mfd capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2 milliamp. AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by shading on the schematic diagram and the parts list.

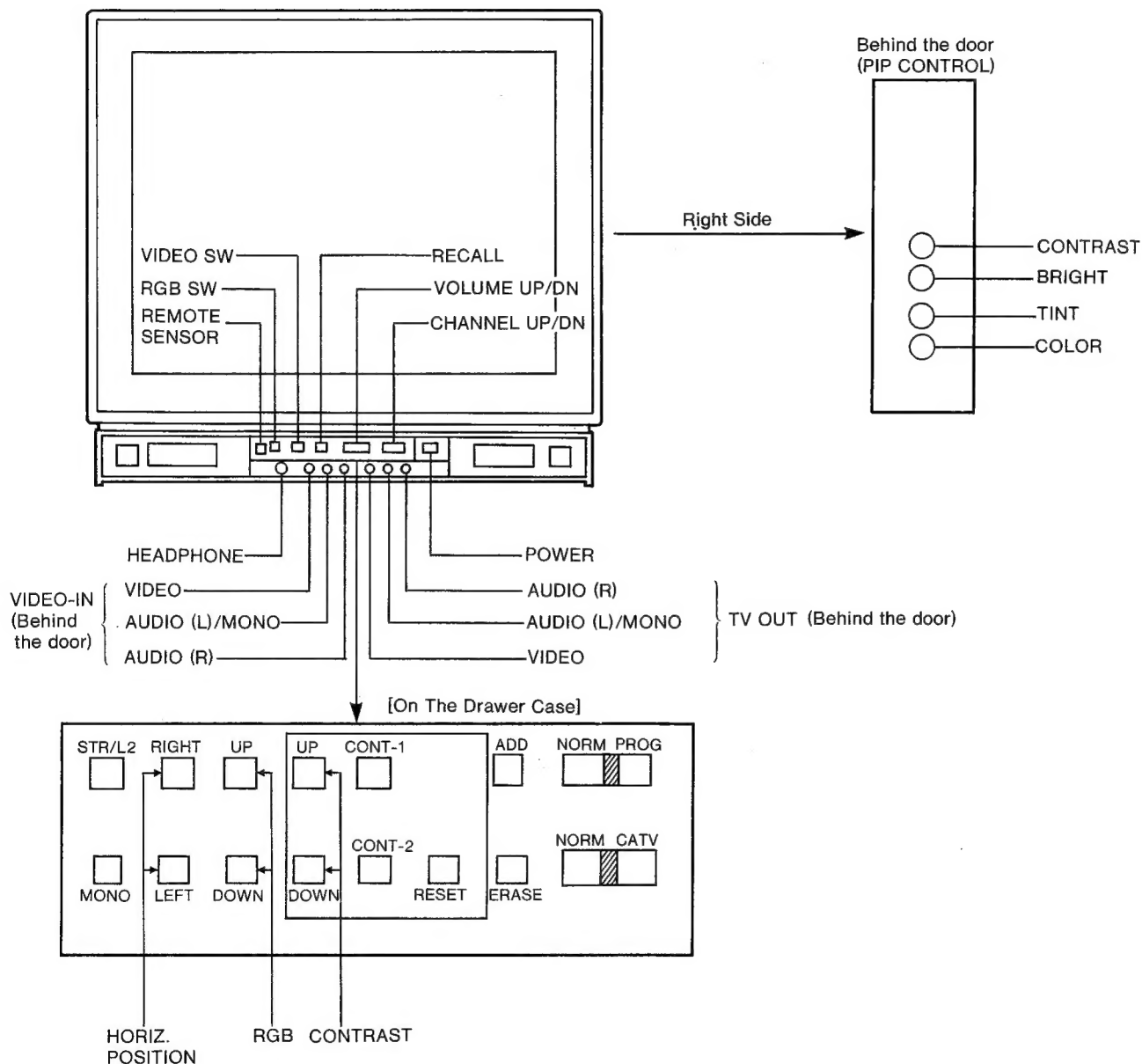
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

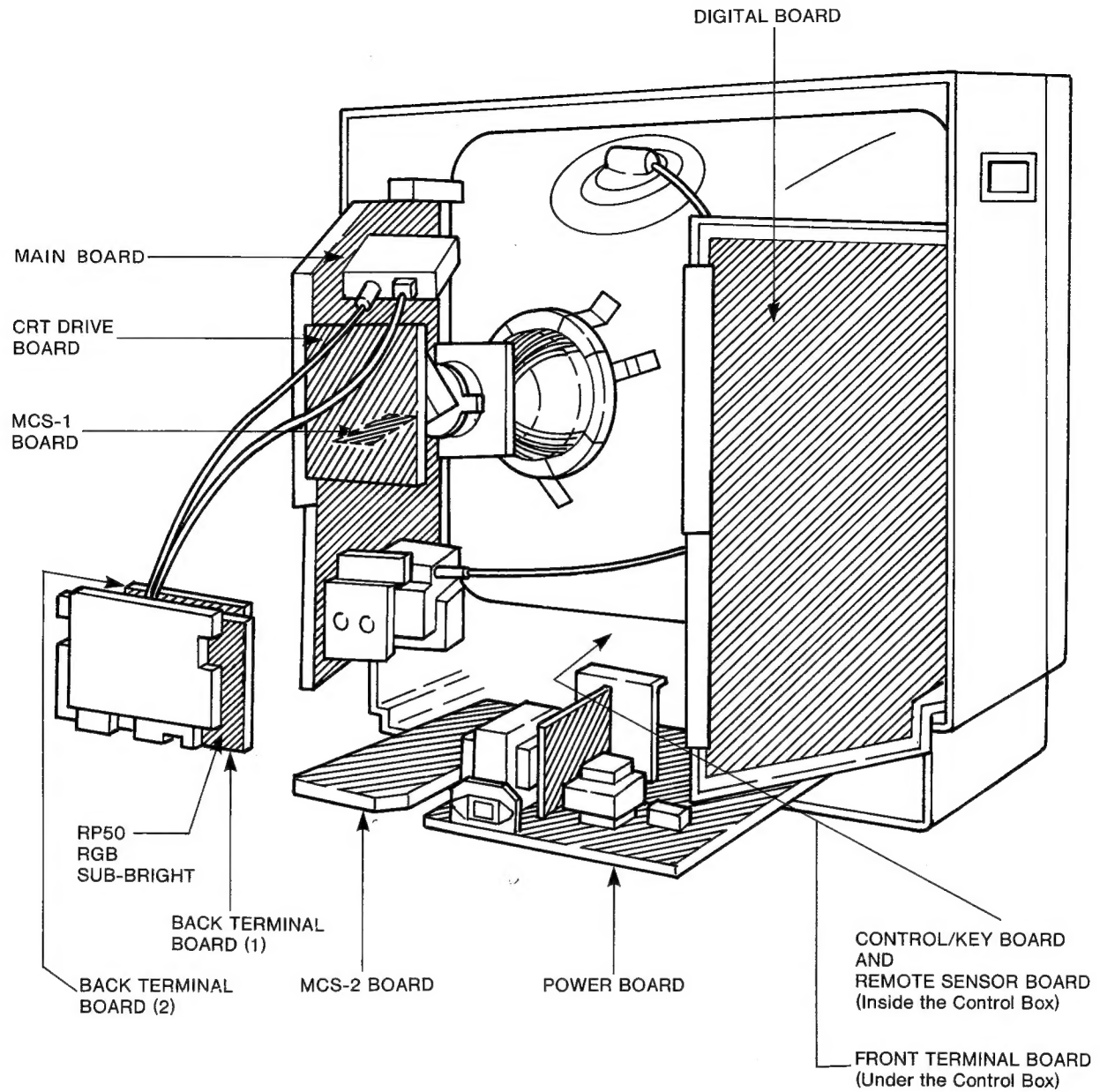
SERVICE NOTES

1. When replacing parts or circuit boards, clamp the lead wires to terminals before soldering.
2. When replacing a high wattage resistor (oxide metal film resistor) on circuit board, keep the resistor 10mm (1/2 in.) away from circuit board.
3. Keep wires away from high voltage or high temperature components.

FRONT CONTROLS VIEW



CHASSIS VIEW



MECHANICAL DISASSEMBLY

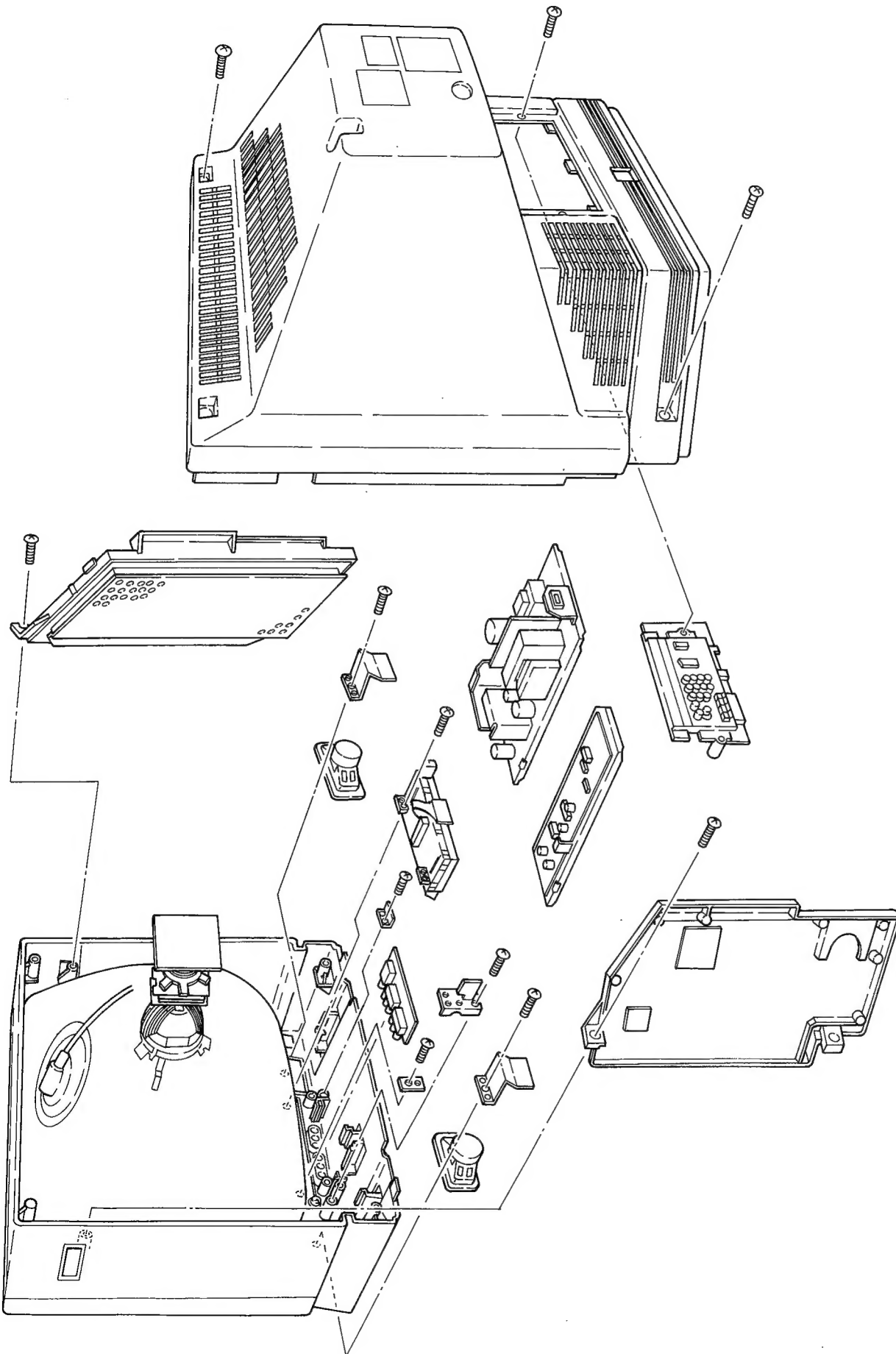


Figure 2.

CONTROL CASE DISASSEMBLY

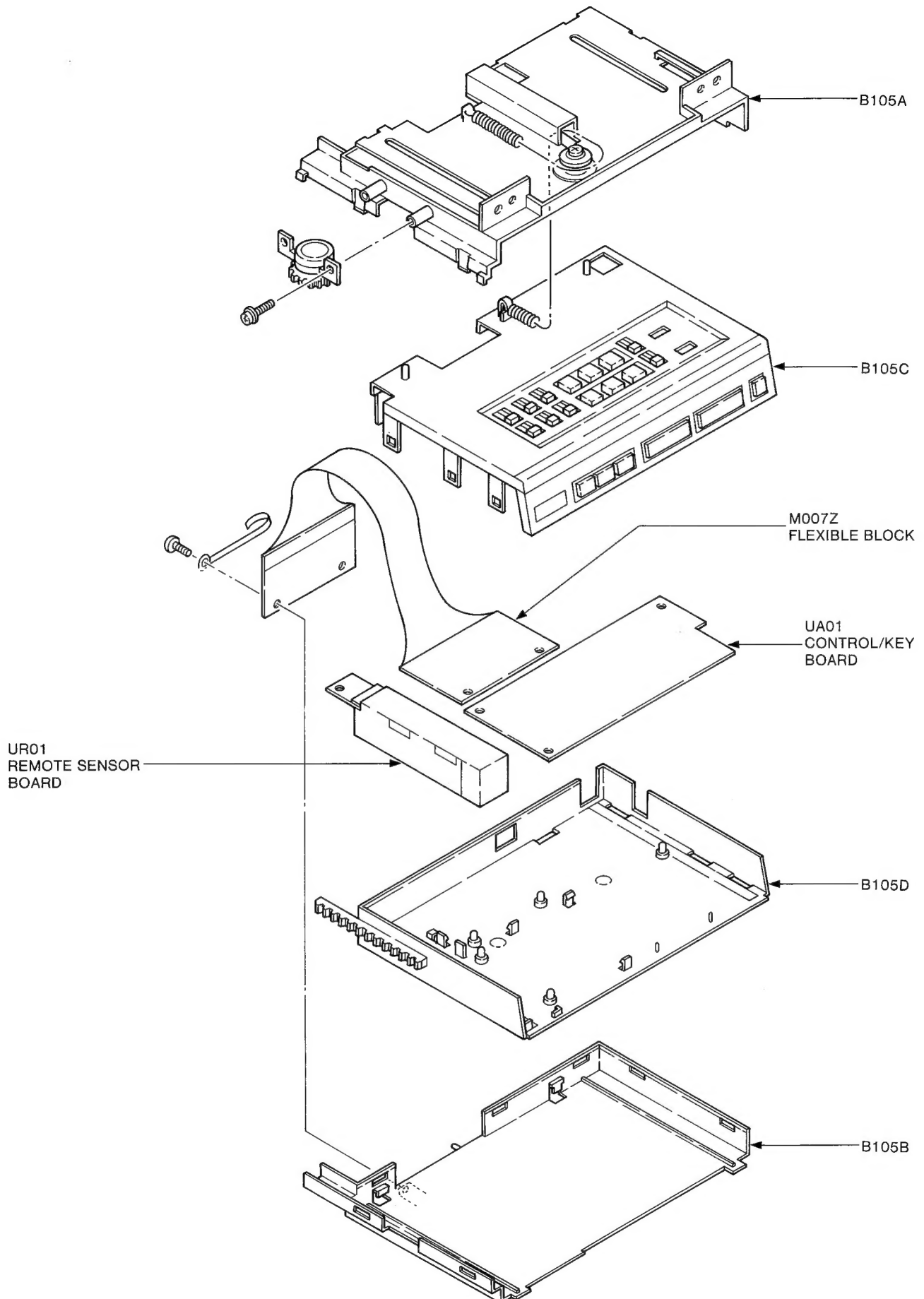


Figure 3.

MAIN BOARD VIEW

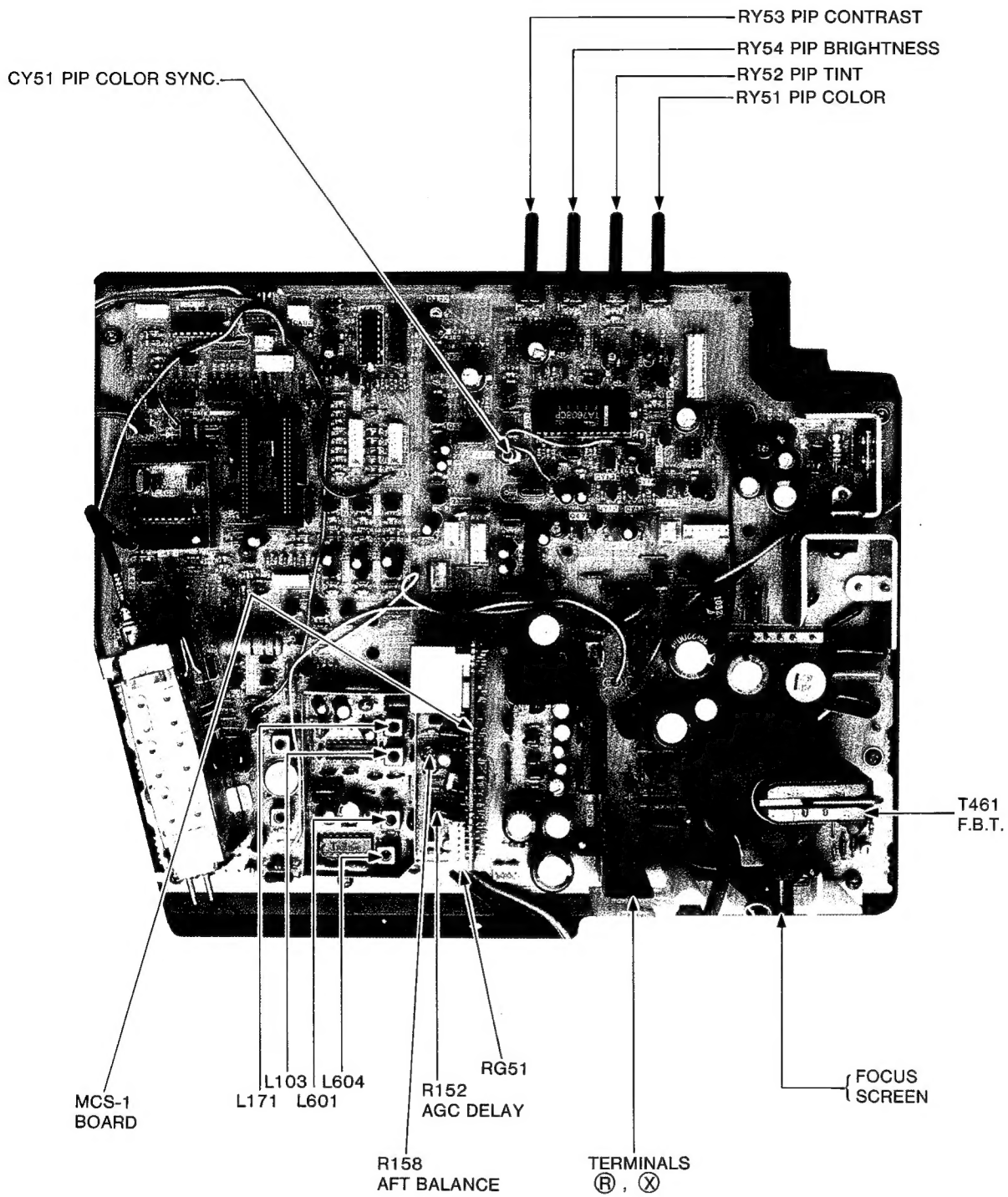
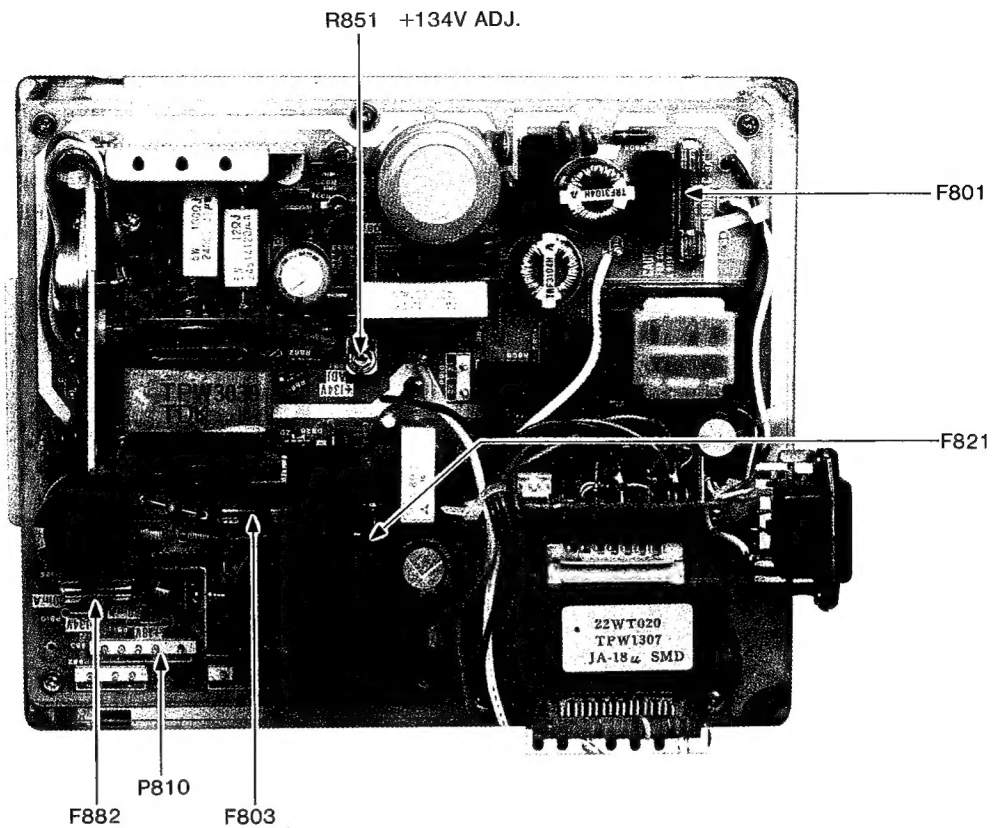


Figure 4.

POWER BOARD VIEW



MCS-2 BOARD VIEW

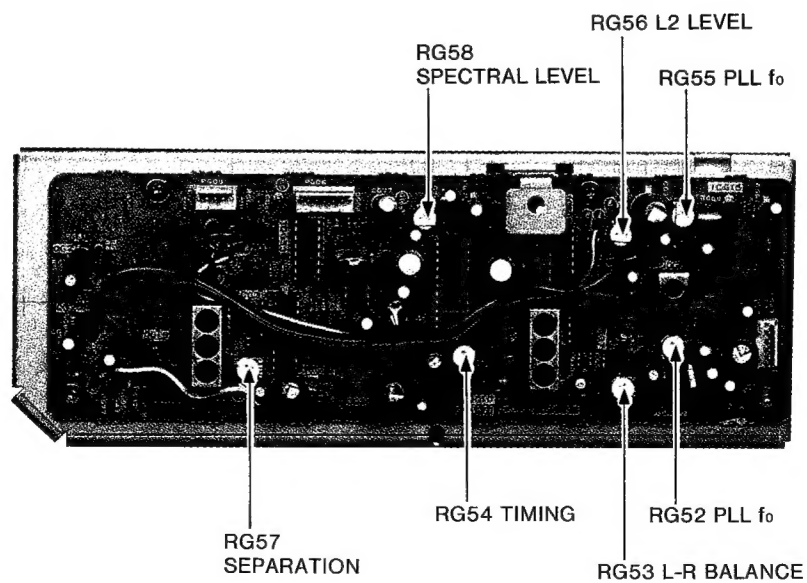


Figure 6.

DIGITAL BOARD VIEW

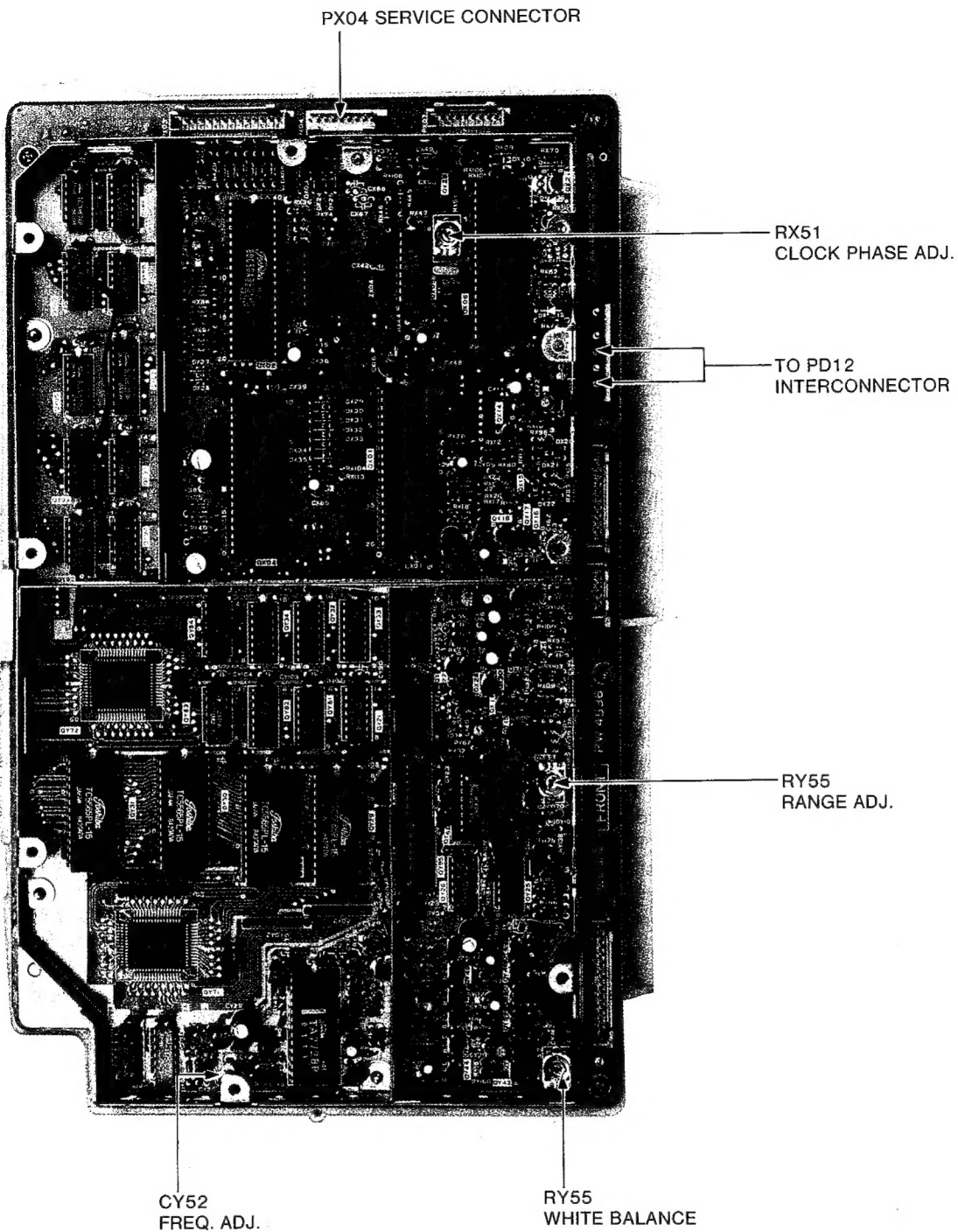


Figure 7.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL

In the majority of cases, a color television receiver will need only slight touch-up adjustment upon installation. Check the basic characteristics such as height, vertical sync., horizontal sync. and focus.

Observe the picture for good black and white details without objectionable color shading. If color shading is evident, demagnetize the receiver.

If color shading still persists, perform purity and convergence adjustments. This should be all that is necessary to achieve optimum receiver performance.

FOCUS ADJUSTMENT

Adjust the FOCUS Control (on T461) for well defined scanning lines on the picture screen.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the CONTRAST Control to minimum (zero beam current).
3. High voltage must be measured below 30.5 kV.
4. Rotate the CONTRAST Control to both extremes to be sure the high voltage does not exceed the limit under any conditions.

+134 VOLT POWER SUPPLY ADJUSTMENT

CAUTION: B+ voltage closely relates to the high voltage. To prevent hazardous X-RAY RADIATION, the B+ voltage must be properly adjusted to +134 volts.

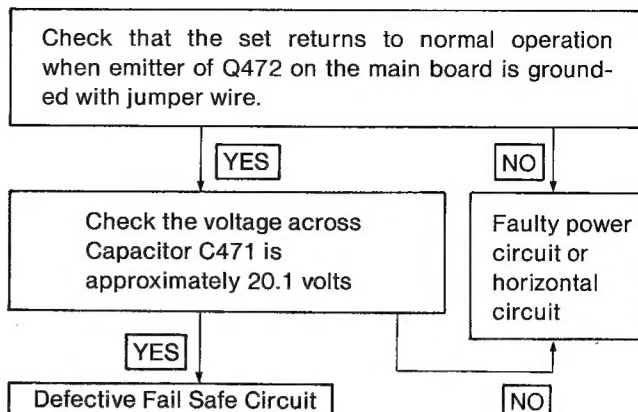
1. Tune in an air signal. Adjust the Front controls for normal picture.
2. Check that the AC power line voltage is normal (120 volts AC, 60 Hz).
3. Connect a VTVM between Test Jumper P-810 on the POWER Board (See figure 5.) and chassis ground.
4. Adjust the +134 ADJ. (R851) on the POWER Board for +134 volts reading. Remove the VTVM.

FS CIRCUIT CHECK

The Fail Safe (FS) circuit check is indispensable for the final check in servicing. Checking should be done following the steps below.

1. Turn the receiver on and adjust customer controls for normal operation.
2. Temporarily short TP- R and TP- X on the Main Board with a jumper wire. Raster and sound will disappear.
3. The receiver must remain in this state even after removing the jumper wire. This is the evidence that the FS circuit is functioning properly.
4. To obtain a picture again, temporarily turn the receiver off and allow the FS circuit more than 5 seconds to reset. Then turn the power switch on to produce a normal picture.

Troubleshooting Guide for Fail Safe Circuit



AGC DELAY ADJUSTMENT

1. Tune in the strongest station in your area.
2. Turn the AGC DELAY Control (R152) fully counter-clockwise, then turn it clockwise until snow noise just disappears from the screen.

COLOR PURITY ADJUSTMENT

NOTE: Before attempting any purity adjustment, the receiver should be operated for at least fifteen minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Turn the CONTRAST Control to maximum.
3. Connect pin 9 (180V line) and KR pin also pin 9 and KB pin on the CRT DRIVE BOARD with a short jumper to obtain a green raster.
4. Loosen the clamp screw holding the yoke, and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet (See figure 9.) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, center the raster vertically.
7. Slowly move the yoke forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue raster.
9. Proceed with convergence adjustment.

CONVERGENCE ADJUSTMENTS

NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ CENTER CONVERGENCE ADJUSTMENT

1. Use a crosshatch pattern from a color bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for a well defined pattern.
3. Adjust two tabs of the four-Pole Magnets to change the angle between them (See figure 9.) and superimpose red and blue vertical lines in the center area of the picture screen. (See figure 10.)
4. Turn both tabs at the same time keeping the angle constant to superimpose red and blue horizontal lines at the center of the screen. (See figure 10.)
5. Adjust the two tabs of six-Pole Magnets to superimpose red/blue line with green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5, keeping in mind red, green and blue movement, because four-Pole Magnets and six-Pole Magnets have mutual interaction and make dot movement complex.

■ CIRCUMFERENCE CONVERGENCE ADJUSTMENT

1. Loosen the clamping screw of deflection yoke slightly to allow the yoke to tilt.
2. Temporarily put a wedge as shown in figure 8. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 10.) Push the mounted wedge into the space between the picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 10.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on the picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick three adhesive tapes on wedges as shown in figure 8.

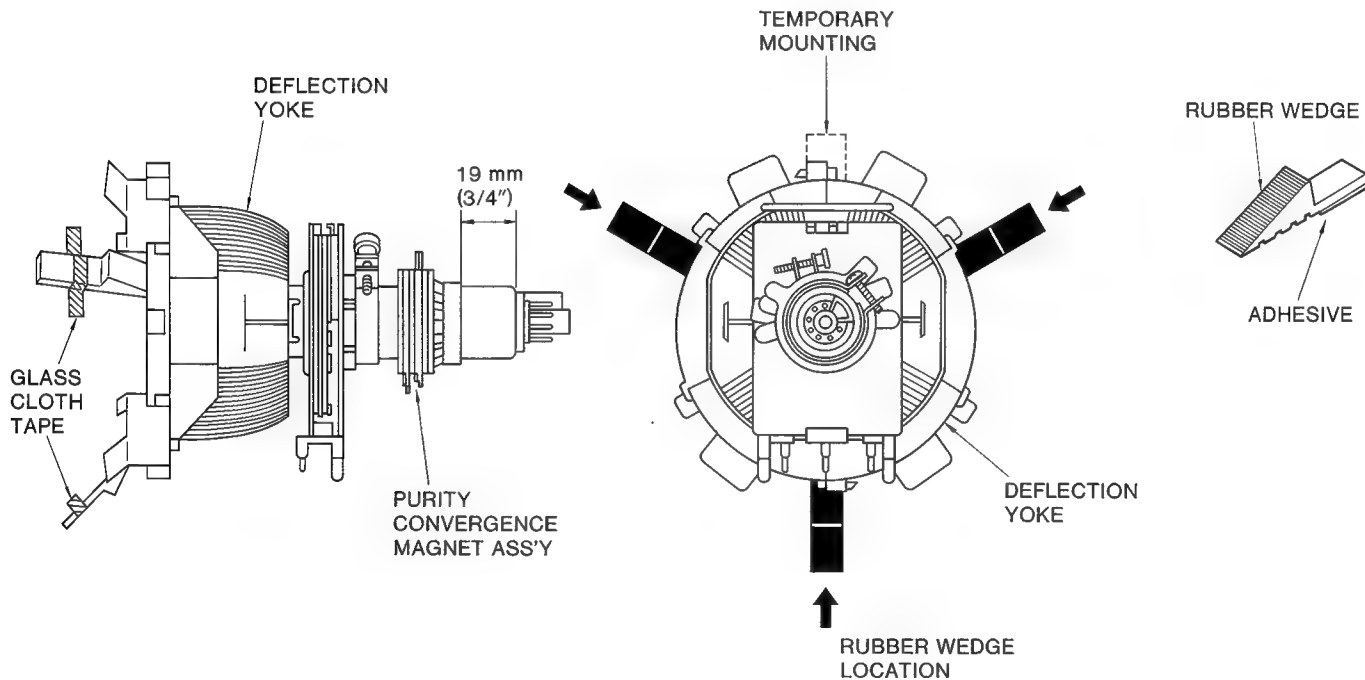


Figure 8.

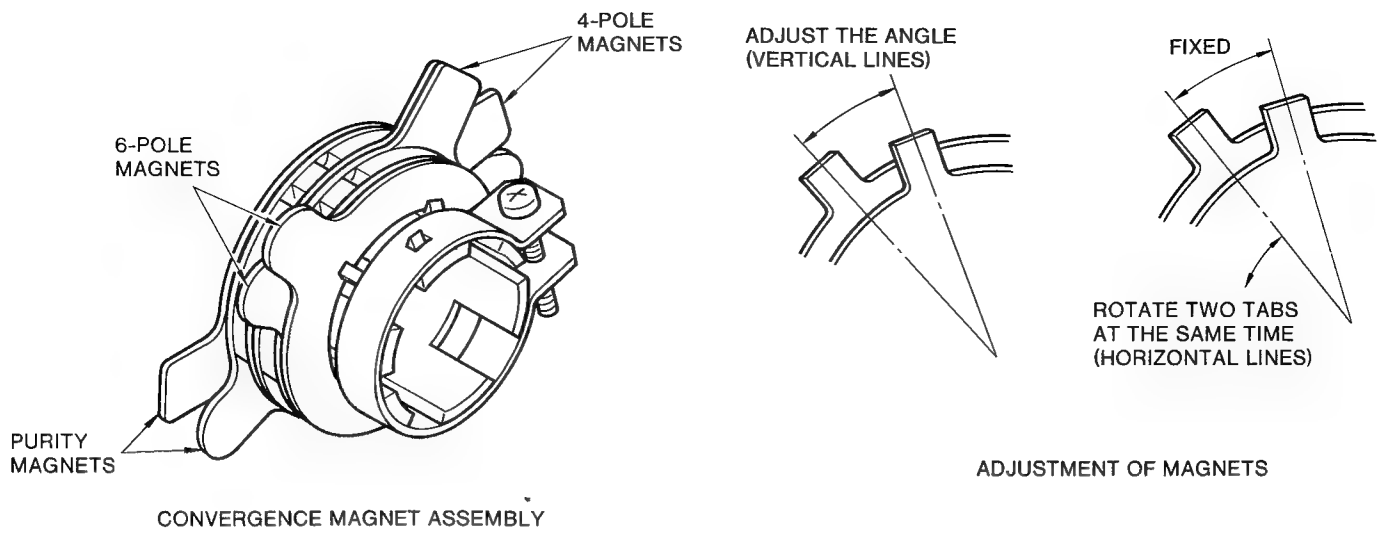


Figure 9.

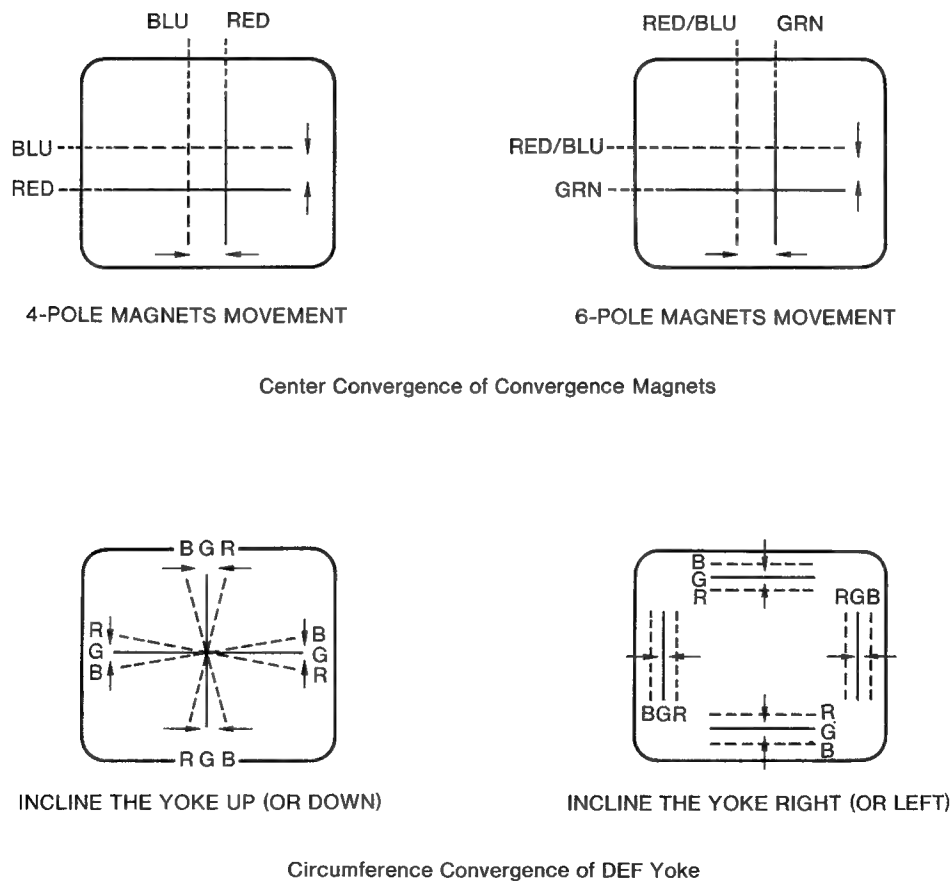


Figure 10. Dot Movement Pattern

CONVERGENCE COMPENSATOR

Compensators L462A and L462B are used to correct misconvergence (Red-Green) at the top center or bottom center on screen, when the misconvergence is still evident even though the yoke adjustment is tried.

1. To correct horizontal misconvergence (Red-Green), put compensator L462A on the yoke back (see figure right) to find a position for minimizing misconvergence. Mark the position and remove protective paper on the rear of L462A to stick it in place. Apply adhesives on both of yoke and L462A.

2. To correct vertical misconvergence (Red-Green), put the tips of compensator L462B into either of holes on the yoke core and apply adhesives.

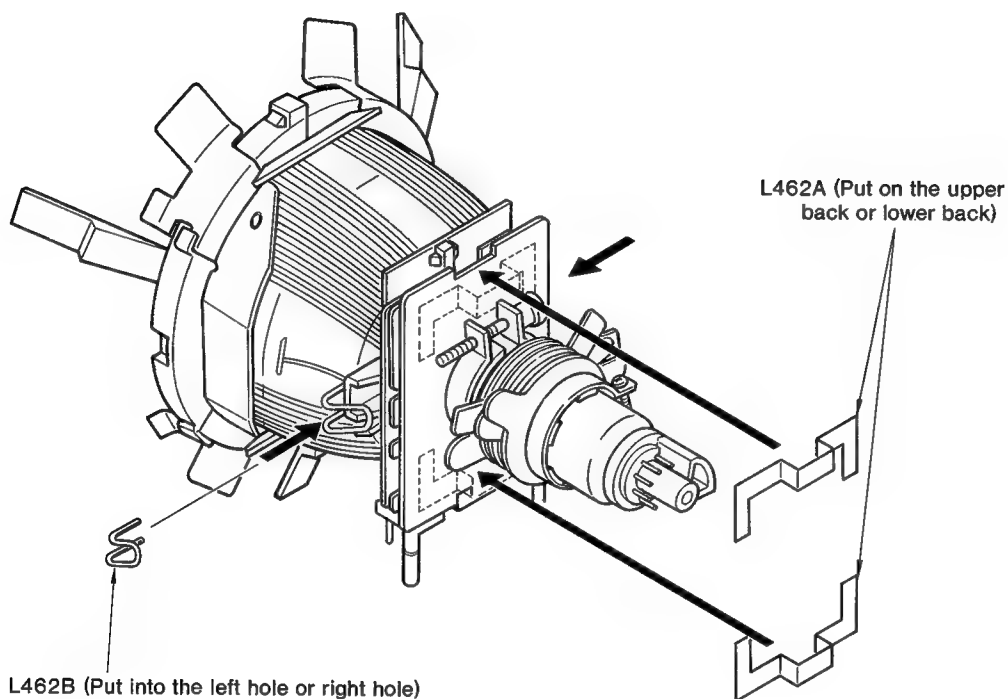


Figure 11. Convergence Compensator

PICTURE I-F SWEEP ALIGNMENT

Refer to figures 4, 12 and 14 for alignment points and test equipment connections.

1. Unsolder the solder link (A) on the foil side of Main Board and connect a matching pad from the sweep/marker generator in series with a 10k ohm resistor to the junction of L101 and solder link (A). (See figure 14.)
2. Connect a oscilloscope (signal input) with direct probe to terminal TP-12 on the Main Board (See figure 14.) through 100k ohm resistor.
3. Apply +7.3 volt bias to terminal TP-14 on the Main Board. (See figure 14.)
4. Disconnect the antenna leads. Turn the receiver on.
5. Set the AGC DELAY Control (R152) fully counter-clockwise. (See figure 4.)
6. Proceed with the alignment steps following the chart below.
7. If the response on oscilloscope appears unstable, unsolder the solder link (B) (AGC pattern) temporarily. (See figure 14.)

STEP	SWEEP/MARKER GENERATOR	ADJUST	REMARKS
L103 ALIGNMENT			
Set oscilloscope gain for 0.05V/cm. Adjust sweep output for easy alignment.			
L103	45.75 MHz Marker ON	L103	Adjust L103 for the maximum at 45.75 MHz on scope. (See figure 13.)
After completing the above steps, disconnect equipment, resolder the solder links (A) and (B), and adjust the AGC Delay circuit following AGC DELAY ADJUSTMENT.			

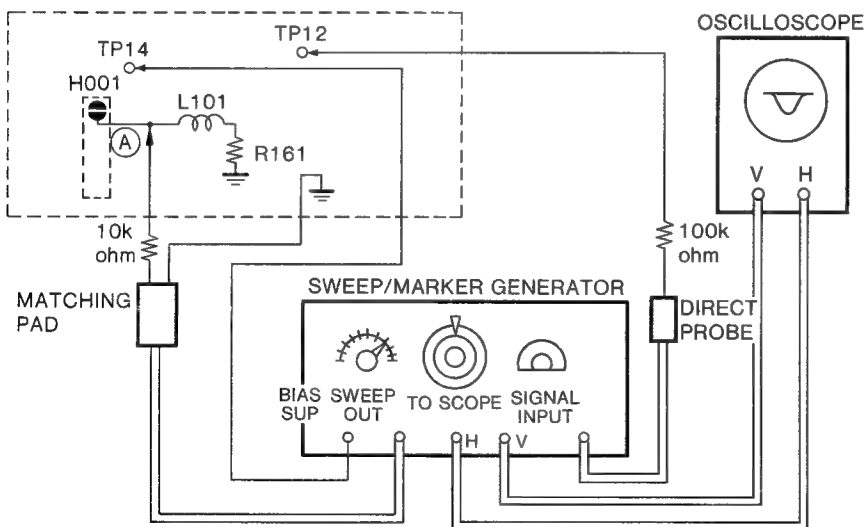


Figure 12. Picture I-F Sweep Alignment

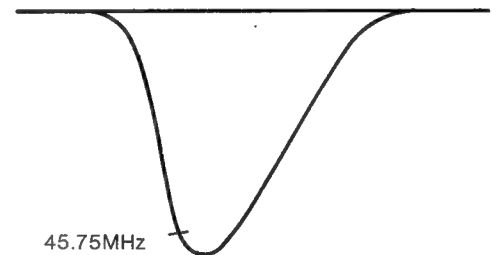


Figure 13. Magnified Response Curve

SOUND I-F SWEEP ALIGNMENT

Refer to figures 4 and 15 for alignment points and test equipment connections.

1. Unsolder the solder link (A) on the foil side of Main Board and connect a matching pad from the sweep/marker generator in series with a 10k ohm resistor to the junction of L101 and R161. (See figure 15.)
2. Connect an oscilloscope (signal input) with direct probe to pin 12 of IC601 on the Main Board (See figure 4.) through 100k ohm resistor.
3. Apply +7.3 volt bias to pin 14 of IC601 on the Main Board. (See figure 4.)
4. Disconnect the antenna leads. Turn the receiver on.

STEP	SWEEP/MARKER GENERATOR	ADJUST	REMARKS
L604 ALIGNMENT			
Set oscilloscope gain for 0.05V/cm. Adjust sweep output for easy alignment.			
L604	45.75 MHz Marker ON	L604	Adjust L604 for maximum at 45.75 MHz on scope. (See figure 15.)
After completing the above steps, disconnect equipment, resolder the solder links (A) and (B), and adjust the AGC Delay circuit following AGC DELAY ADJUSTMENT.			

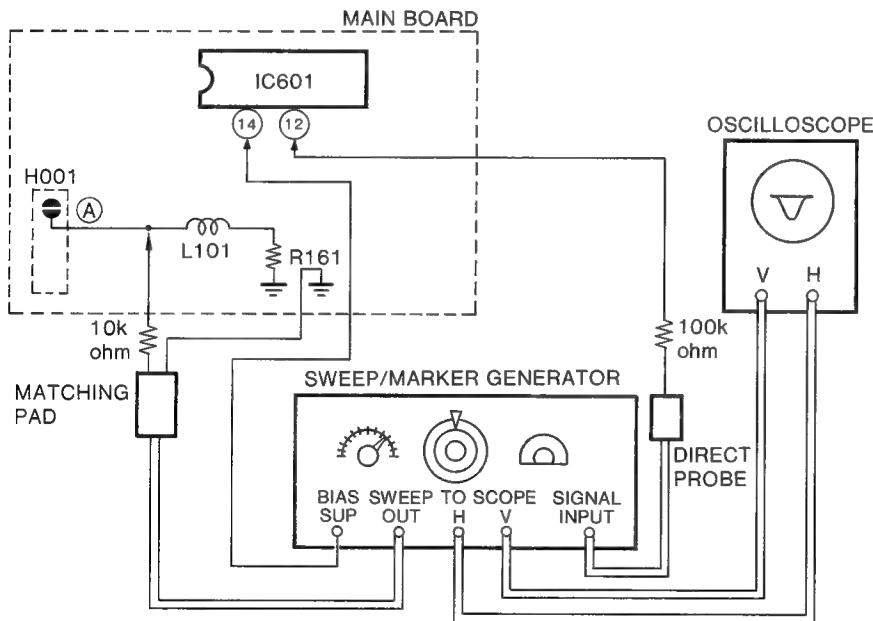


Figure 15. Sound I-F Sweep Alignment

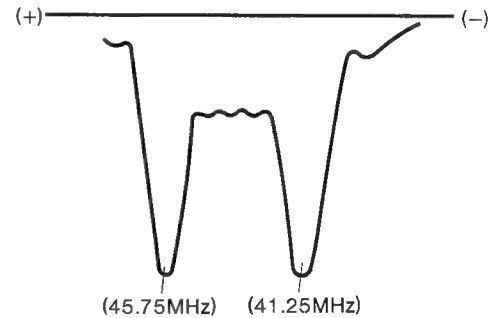


Figure 16. Magnified Response Curve

AFT (Automatic Fine Tuning) ALIGNMENT

AFT BALANCE ADJUSTMENT

1. Unsolder to open the solder links (A) and (C) on the Main Board. (See figure 14.)
2. Connect a DIGITAL MULTI METER to Pin 6 of IC101 (+) and Pin 5 of IC101 (-).
3. Supply +3.0 volts to TP-14 with external power supply.
4. Turn the receiver on.
5. Adjust the AFT BALANCE ADJ. (R158) on the Main Board (See figure 4.) for -0.5 volt on DIGITAL MULTI METER.

AFT OVERALL RESPONSE ALIGNMENT

Refer to figure 14 and 17 for alignment point and test equipment connections.

1. Unsolder to open the solder links (A) and (C) on the Main Board.
2. Connect the sweep/marker generator in series with matching pad to the junction of solder link (A) and L101 on the Main Board. (See figure 17.) Tune to 40 – 50MHz sweep.
3. Connect a capacitor (33 μ F, 16WV) across Pin 11 of IC101 (+ side) and TP-14 (- side).
4. Connect the oscilloscope with direct probe to Pin 6 of IC101. (See figure 17.)
5. Turn the receiver on and proceed with the steps below.

STEP	SWEEP/MARKER GENERATOR	ADJUST	REMARKS
L171	45.75 MHz Marker ON	L171	Adjust L171 so the 45.75 MHz Marker is just on reference level line. (See figure 18.)
After completing the above steps, resolder the solder links, and remove the 33 μ F capacitor.			

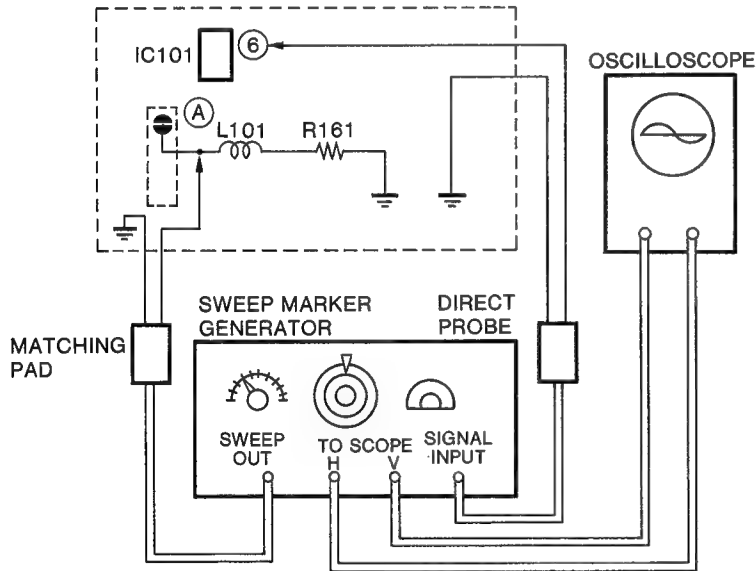


Figure 17. AFT Alignment

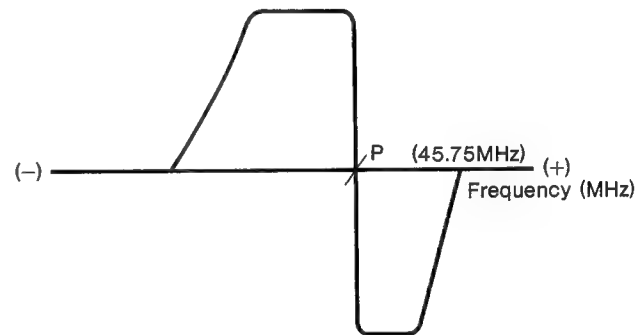


Figure 18. AFT Response Curve

PIP COLOR SYNC ADJUSTMENT (CY51 on Main Board)

1. Connect a plastic film capacitor $0.47\mu\text{F}$ to the pin 8 of ICY02 and ground.
2. Connect a frequency counter to the pin 17 of ICY02.
3. Turn the TV on and adjust PIP COLOR SYNC Control (CY51) for 3.579545 MHz on the counter.
4. Remove the capacitor and frequency counter.
Check the PIP picture shows a stable color with the power turned on and off, and with a channel changed.

RGB SUB-BRIGHT ADJUSTMENT (RP50 on Back Terminal Board)

1. Receive a RGB signal.
2. Adjust RGB SUB-BRIGHT Control (RP50) for the best brightness on the picture, together with RGB CONTRAST control on front of TV.

REMOTE CONTROL SENSOR ALIGNMENT

When LR01 or CR01 is replaced, readjustment is required. During adjustment, keep the VOLUME DOWN Button on the remote control hand unit pressed.

1. Unsolder to remove the bottom cover on bottom of Remote Sensor Board.
2. Turn the TV set on.
3. Connect an oscilloscope across CR01 (See figure 19.)
4. Rotate the core of LR01 clockwise from the fully counterclockwise position to adjust LR01 for the maximum amplitude of waveform on the scope. (See figure 20.)

Note: While adjustment, keep the amplitude of waveform under 1 Vp-p to prevent saturation, by changing the direction of remote hand unit.

5. After completing adjustment, check the effective range of distance of hand unit for approx. 5 meters or more.

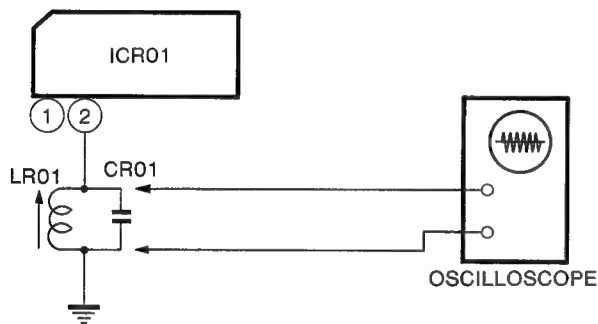


Figure 19.

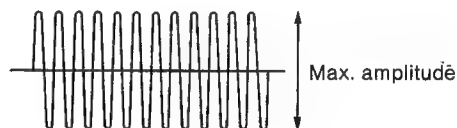


Figure 20.

MCS BOARD ALIGNMENT

1. PLL fo ALIGNMENT (RG52) MCS-2 BOARD

- 1) Tune in an active channel.
- 2) Connect a capacitor ($10\mu\text{F}$) between pin 1 of ICG06 and chassis ground.
- 3) Connect a resistor (82k ohm) between pin 6 of ICG06 and chassis ground.
- 4) Connect frequency counter to pin 6 of ICG06 and adjust RG52 until the counter reads 31.47k Hz.
Output signal: 0.8 Vp-p square wave

2. PLL fo ALIGNMENT (RG55) MCS-2 BOARD

- 1) Tune in an active channel.
- 2) Connect a capacitor ($10\mu\text{F}$) between collector of QG13 and chassis ground.
- 3) Connect frequency counter to emitter of QG17 and adjust RG55 until the counter reads 78.67k Hz.
Output signal: 0.8 Vp-p triangle wave

3. L-R BALANCE ALIGNMENT (RG53) MCS-2 BOARD

- 1) Tune in an active channel.
- 2) Set STR/L2 Button in the stereo or mono mode.
- 3) Short RG25 with a jumper wire.
- 4) Connect oscilloscope to emitter of QG10 (Terminal GA) and adjust RG53 to minimize the audio signal on scope.

4. INPUT LEVEL ALIGNMENT (RG51) MCS-1 BOARD

- 1) Connect the stereo signal generator (e.g. TRANSMITTER WITH dbx-TV ENCODER), and set the modulation in 300 Hz, 14.1% (-17dB) on left channel only.
- 2) Set STR/L2 Button in the stereo mode.
- 3) Connect a voltmeter to emitter of QG10 (Terminal GA) and adjust RG51 until volt-meter reads 47 mV rms.

Note: If the stereo signal generator is not available, set RG51 to the center.

5. TIMING ALIGNMENT (RG54)..... MCS-2 BOARD

- 1) Connect stereo signal generator (e.g. TRANSMITTER WITH dbx-TV ENCODER), and set the modulation in 300Hz, 14.1% (-17dB) on left channel only.
- 2) Connect a voltmeter across RG37 and adjust RG54 until voltmeter reads +15mV DC.

6. SEPARATION ALIGNMENT (RG57) MCS-2 BOARD

- 1) Connect the stereo signal generator, and set the modulation in 300 Hz, 14.1% (-17dB) on left (or right) channel only.
- 2) Adjust RG57 to minimize the right (or left) channel output (right speaker sound).

Note: If the stereo signal generator is not available, set RG57 to the center.

7. SPECTRAL LEVEL ALIGNMENT (RG58) ... MCS-2 BOARD

- 1) Connect the stereo signal generator, and set the modulation in 8k Hz, 14.1% (-28.3dB) on left (or right) channel only.
- 2) Adjust RG58 to minimize right (or left) channel output (300Hz sound from right (or left) speaker).

Note: If the stereo signal generator is not available, set RG58 to the center.

8. L2 LEVEL ALIGNMENT (RG56) MCS-2 BOARD

- 1) Connect the L2 signal generator, and set the modulation in 300 Hz, 14.1% (-17dB).
- 2) Set STR/L2 Button in the L2 mode.
- 3) Connect voltmeter to emitter of QG10 (Terminal GA) and adjust RG56 until voltmeter reads 47 mV rms.

Note: If the L2 signal generator is not available, set RG58 for normal L2 sound.

DIGITAL BOARD ALIGNMENT

1. ADJUSTMENTS WITHOUT SERVICING JIG

CAUTION:

Disconnect the interconnector PD12 (20V line lead to Digital Board) when adjusting without the servicing jig.

(1) PIP White balance (RY56)

1. Tune in an active channel on PIP to warm up for fifteen minutes.
2. Set the PIP COLOR Control to minimum.
3. Adjust PIP WHITE BALANCE Control (RY56) for a properly white-balanced picture.
4. Rotate PIP BRIGHTNESS and PIP CONTRAST Controls to check for a good white balance in both low and high light areas.

(2) Range Adjustment (RY55)

1. Connect the plus lead of voltmeter to the pin 11 of ICY80, and the ground lead to the pin 13 of ICY80.
2. Adjust RANGE ADJUSTMENT (RY55) for 1 V on the meter.

(3) COLOR PHASE Adjustment (RX51)

1. Rotate COLOR PHASE Control (RX51) fully clockwise from the parts side of Digital Board.

(4) OSC FREQUENCY Adjustment (CY52)

1. Connect a frequency counter to the pin 6 of ICY95.
2. Unsolder the solder link for pin 16 of ICY01.
3. Supply 5.8 V ($V_{cc}/2$) from an external DC power to the pin 16 of ICY01.
4. Turn the TV on and adjust CY52 for 7.16 MHz on the frequency counter.

2. SERVICING JIG INSTRUCTION

(1) Outline of Jig

In the digital TV, CPU TMP80C50A9902-6 (ICX02) acquires the data memorized in EAROM HDA2061 (ICX03) and sends the data to IC's MAA2210 (ICX04) and MAA2500 (ICX06) to control TV picture. (See figure 21.) This adjusting jig reads out the data in EAROM, corrects the read-out data and writes the corrected data in

EAROM, to adjust TV picture.

This jig, which has the same processing performance as that of CTU incorporated in the digital TV set, also can provides the checking of picture adjustment produced by the corrected data.

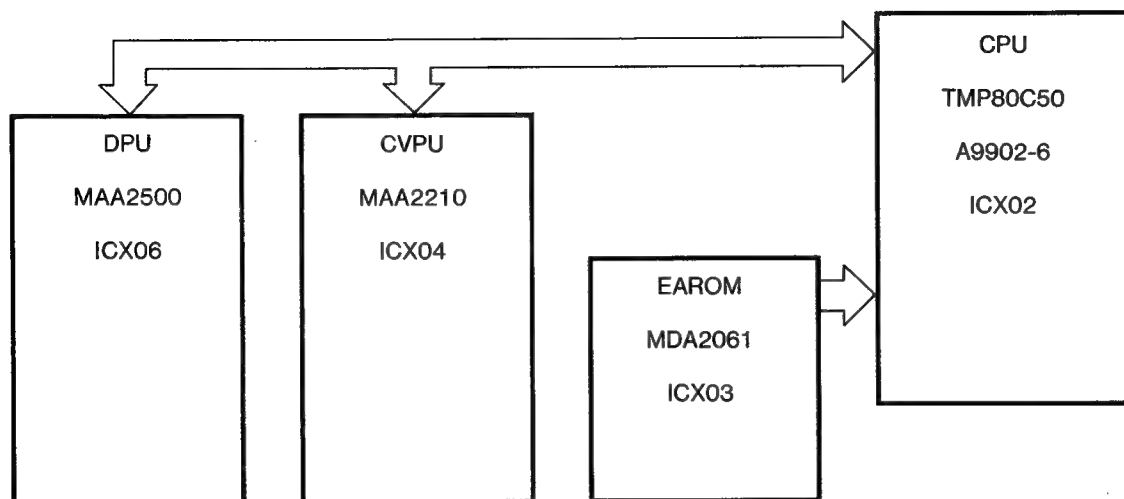


Figure 21.

(2) Operation of Jig

The block diagram of jig connection to the digital TV is shown in Figure 22.

Pressing the control key stops operation of CPU A. Then CPU B incorporated in the jig acquires the data of EAROM and sends the data to IC's (CVPU and DPU). At this time, the TV picture remains in the same condition as that represented by CPU A, because CPU B has the same performance as that of CPU A. But the user controls (Picture sharpness, Contrast, Brightness, Tint, Color) are set in the standard condition. Correcting the data by control key changes TV picture to the corrected one.

Then writing the corrected data by control key into EAROM and operating CPU A in TV set result in the picture before data correction. And to obtain the picture after data correction, ON and OFF operation of power switch of TV set is required after the above procedure. Besides, setting the data of EAROM in the factory-preset condition is possible by pressing control key, though readjustment of subcarrier, brightness, picture height, symmetry correction is necessary.

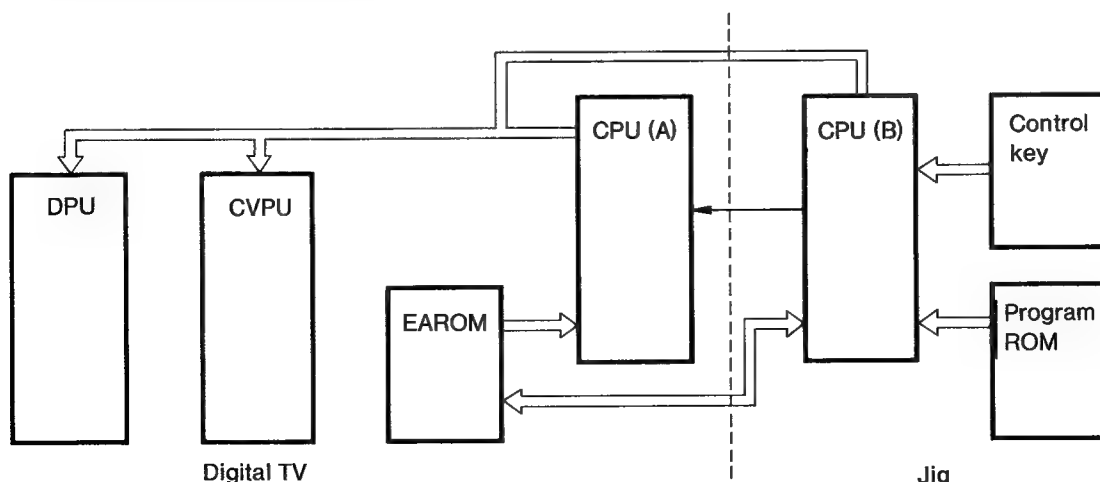


Figure 22.

(3) Operating Instruction of Jig

1. Remove the back cover of digital TV.
2. Connect the jig connector (9 pin) to PX04 on Digital Board, and connect the interconnector (PD12) between terminal 20 on Main Board and terminal 37 on Digital Board.
3. Turn the jig on and LED will indicate **E n d**.
4. Turn the digital TV on and press the picture standard key of digital TV.
5. Press RED RTO key and LED will indicate **0000**.
6. Press adjusting item key and LED will indicate **0000**.
7. Press one of keys; Δ (UP), ∇ (DOWN) and O to F to select the adjusting data. At this time, the data is revised into the new data. SET key should be pressed, when one of keys among O to F is pressed.
8. After the adjusting data is revised, press MOD CLR key. This time, LED will indicate **0000**.
9. When selecting the adjusting item again, repeat the procedures 6, 7 and 8 above.
10. When all adjustments finish, press the WRT STR key and LED will indicate **E n d**.
11. Turn the digital TV off.
12. Turn the adjusting jig off.
13. Disconnect the connector of jig from PX04, and the interconnector (PD12).
14. Check the picture is corrected with the digital TV turned on.
15. Mount the back cover to digital TV.

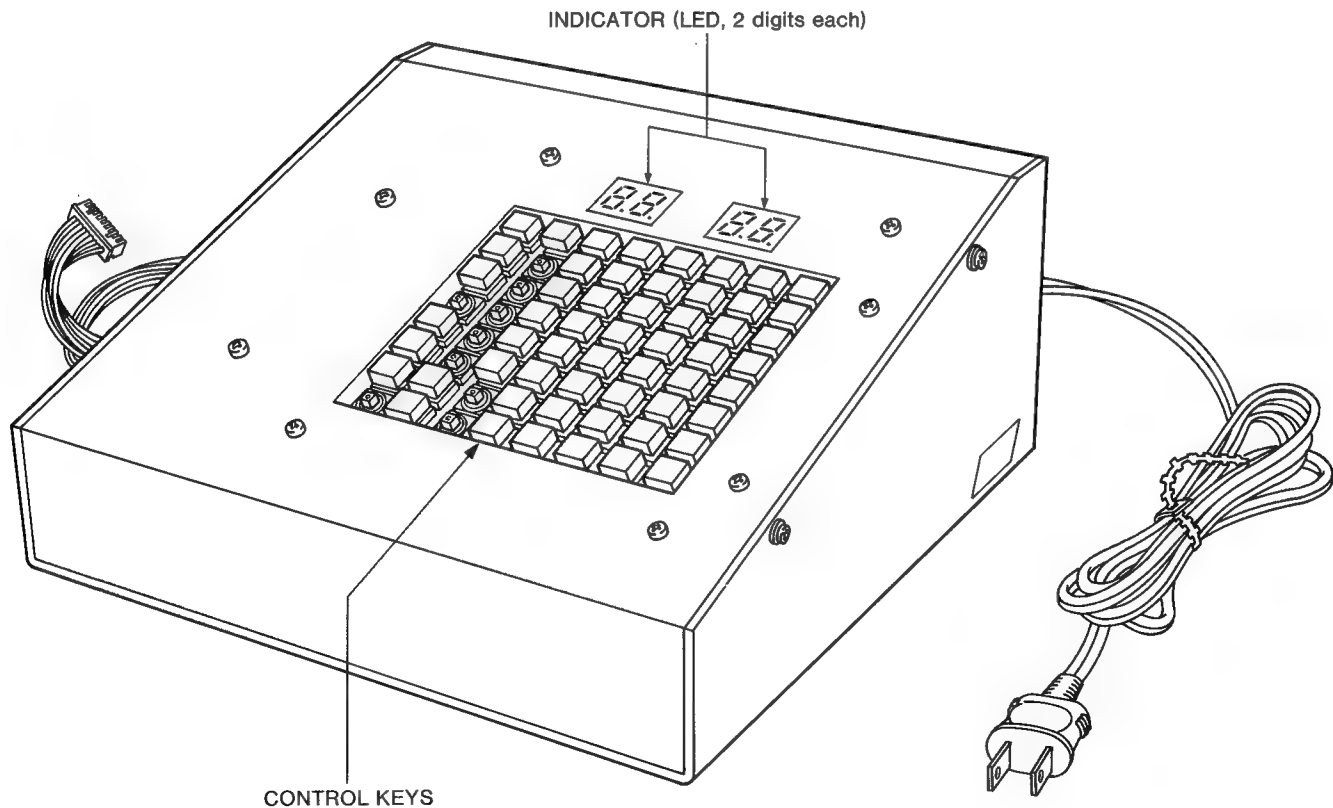
Adj. item No. Data

CAUTION:

Do not turn the digital TV on when the adjusting jig indicates other characters than **E n d** with the jig connected to TV, to prevent damage in the TV.

Note:

1. Pressing W,R STO key writes the factory-preset data into EAROM, when LED is indicating **E n d**. In addition, subcarrier, brightness, picture height and symmetry correction should be readjusted.
2. When the data of EAROM was not revised with the adjusting jig, but just confirmed, press STR key. LED will indicate **E n d**. Through this procedure, EAROM data does not change.



SERVICING JIG VIEW

■ CONTROL KEY FUNCTION

(1) CONTROL KEY

Key Name	Function
WRT STR	Writes the adjusting data into EAROM. CPU in digital TV begins operation. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only.
STR	CPU in digital TV begins operation. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only.
MOD CLR	Resets the adjusting item. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △ △ : Data)
RED RTO	Stops CPU operation in digital TV and reads out data of EAROM. LED indicates <input type="text"/> E <input type="text"/> n <input type="text"/> d <input type="text"/> only.
WR STO	Stops CPU operation in digital TV, writes in the factory-preset data into EAROM and reads out them. LED indicates <input type="text"/> E <input type="text"/> n <input type="text"/> d <input type="text"/> only.
SBRT △ (Subbright)	Makes the adjusting data UP (+1). LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
P-ACL 1 ▽	Makes the adjusting data DOWN (-1). LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
CONT SET	Acquires the adjusting data when one of keys among O to F is selected. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
WDR 0	Means "0" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
WDG 1	Means "1" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
WDB 2	Means "2" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
COR 3	Means "3" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
COR 4	Means "4" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
COG 5	Means "5" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
COG 6	Means "6" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
COB 7	Means "7" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
COB 8	Means "8" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
SUBC 9 (Subcarrier)	Means "9" key in selecting numerals of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)
MODE A	Means "A" key in selecting characters of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○ ○ : Adjusting item No. △△: Data)

Key Name	Function
BUST B (Burst Level)	Means "B" key in selecting characters of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○○ : Adjusting item No. △△: Data)
Fsc Asw C	Means "C" key in selecting characters of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○○ : Adjusting item No. △△: Data)
KIL 1 D (Killer 1)	Means "D" key in selecting characters of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○○ : Adjusting item No. △△: Data)
KIL 2 E (Killer 2)	Means "E" key in selecting characters of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○○ : Adjusting item No. △△: Data)
WDM F	Means "F" key in selecting characters of the adjusting data. LED indicates <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> only. (○○ : Adjusting item No. △△: Data)

(2) ADJUSTING ITEM SELECTING KEY

Key Name	Item No.	Data	Function
WDR 0	00	Adjust	Reads output data of white drive, and is automatically set with Red Axis AKB turned on.
WDG 1	01	Adjust	Reads output data of white drive, and is automatically set with Green Axis AKB turned on.
WDG 2	02	Adjust	Reads output data of white drive, and is automatically set with Blue Axis AKB turned on.
COR 3	03	Adjust	Reads output data of cut-off, and is automatically set with Red Axis AKB turned on.
COR 4	04	00	Regulates noise converter (A/D converter) into the ON or OFF condition.
COG 5	05	Adjust	Reads output data of cut-off, and is automatically set with Green Axis turned on.
COG 6	06	01	Sets ABCL1, and regulates ACL effect.
COB 7	07	Adjust	Reads output data of cut-off, and is automatically set with Blue Axis AKB turned on.
COB 8	08	01	Sets ABCL 0, and regulates ACL effect.
SUBC 9 (Subcarrier)	09	Adjust	Adjusts color sync. Turns color sync. ON-OFF switch off. Keep in mind to press MODCLR after adjustment.
MOD A	0A	52	Selects mode of video processor. MAA2200(VPU):5A MAA2210(CVPU):52
BUST B (Burst Level)	0B	38	Adjusts ACC gain.

ABCL	ABCL	ACL
1	0	effect
0	0	-20 dB
0	1	-10 dB
1	0	-6 dB
1	1	-3 dB

Key Name	Item No.	Data	Function	
Fsc Asw C	0C	00	Turns color sync. on or off. Checks adjustment of color sync.	
KIL 1 D	0D	5B	Sets upper limit of color killer.	
KIL 2 E	0E	5B	Sets lower limit of color killer.	
WDM F	0F	Adjust	Corrects output level (red, green and blue axes at the same time) of detection pulse at white drive.	
SBRT (Subbright)	10	34	Changes the AKB cut-off level for three axes at the same time.	
P. ACL 1	11	10	Sets contrast correction data (F).	Contrast gain = S (F ₀ —F) F ₀ : Constant (31)
P. ACL 2	12	07	Sets contrast correction data (S).	
UNI COLR (Unicolor)	13	20	Sets color reduction level comparing to contrast. (00 = Same level ~ FF = Reduction zero.)	
MIN CONT (Minimum Contrast)	14	0A	Sets contrast level with contrast turned to minimum. (Adjusting range of user is fixed.)	
COLR SATU (Color Saturation)	16	00	Sets color remainder level with color gain turned to minimum.	
CONT SET (Contrast)	17	1A	Sets contrast standard level. (Cursor position) Cursor position also changes with value.	
BRT (Brightness)	18	Adjust	Sets brightness standard level. (Cursor position) Cursor position changes with value.	
PIX QUAT (Picture Sharpness)	19	05	Sets picture sharpness standard level. (Cursor position) Cursor position changes with value.	
COLR SATU (Color Gain)	1A	11	Sets color gain standard level. (Cursor position) Cursor position changes with value.	
TINT	1B	10	Sets tint standard level. (Cursor position) Cursor position changes with value.	
RGB CONT	1C	07	Sets RGB contrast. (Cursor position)	
DRIV R (Drive R)	1D	6E	Sets AKB drive standard level. On red axis.	
DRIV G (Drive G)	5E	63	Sets AKB drive standard level. On green axis.	

Key Name	Item No.	Data	Function
DRIV B (Drive B)	1F	63	Sets AKB drive standard level. On blue axis.
COFF R (Cut-off R)	20	42	Sets AKB cut-off standard level. On red axis.
COFF G (Cut-off G)	21	34	Sets AKB cut-off standard level. On green axis.
COFF B (Cut-off B)	22	30	Sets AKB cut-off standard level. On blue axis.
DPC L (S-correction)	23	7A	S-correction in vertical linearity.
DPC C (Symmetry Correction)	24	20	Symmetry correction in vertical linearity.
VERT HEIT (Vertical Height)	25	Adjust	Sets vertical height.
VERT DC (Vertical DC Level)	26	50	Sets DC level of vertical saw-tooth wave.
VERT MOD 1 (Vertical Mode 1)	27	03	Decides whether vertical is locked to horizontal or not.
VERT MOD 2 (Vertical Mode 2)	28	8B	Sets vertical count down mode.
HORZ MOD 1 (Horizontal Mode 1)	29	07	Sets horizontal system.
HORZ PWID (Horizontal Pulse Value)	2A	42	Sets horizontal drive pulse width. Caution: Do not change without due cause to prevent damage of horizontal output transistor.
HORZ PHAS (Horizontal Phase)	2B	0F	Regulates horizontal position.
HORZ MOD 2 (Horizontal Mode 2)	2C	28	Decides whether horizontal is locked to fsc or not.
AFC MOD (AFC Mode)	2D	90	Sets characteristics of AFC filter.

LED INDICATION

Number	LED	Number	LED	Number	LED	Number	LED	Number	LED
0	0	1	1	2	2	3	3	4	4
5	5	6	6	7	7	8	8	9	9
A	A	B	b	C	C	D	d	E	E
F	F	N	n						

3. ALIGNMENT ITEMS

The table below is the items which requires adjustment due to replacement of parts.

Replaced Parts		Adjusting items
ICX01 MAA2100		Brightness and ABK loop adjustments
ICX04 MAA2210		Color sync (Subcarrier) adjustment
ICX05 MEA2600		Color sync (Subcarrier) and RX58 adjustments
*ICX03 MDA2061	No data	Adjustments for all data in each item
	Data exists	Color sync. (Subcarrier), ABK loop and brightness adjustments
Picture Tube and Flyback Trans.		Screen and ABK loop adjustments
ICX06 MAA2500		Vertical height adjustment

- * When replacing ICX03 (MDA2061), be sure to check that the data is written in the IC by using the adjusting jig. If the IC without data is replaced, TV set will be damaged with the power switch turned on. Generally, the IC must be supplied with the data written in itself.

Check method of data in ICX03 MDA2061

1. Remove the back cover from digital TV.
2. Connect the jig connector (9 pin) to PX04 in Digital Board.
3. Turn the power switch of jig on and LED will indicate En d . If LED will not indicate, turn the power switch on again, or press RESET key to get the indication En d .
4. Disconnect the connector (9 pin) PX07 in digital TV.
5. Turn digital TV on but picture will not come out yet.
6. Press RED STO key on the jig and LED indicates .
7. Press Horizontal pulse width key on the jig.
When LED indicates 2A 42, IC MDA2061 is written with the data. If the window for data indicates other than 42, the IC does not written with data.
8. Press MOD CLR key and STR key on the jig in sequence. LED indicates En d .
9. If ICX03 (MDA2061) is not written with data, turn digital TV off and connect the connector (9 pin) PX07 in digital TV. To write the data into ICX03 (MDA2061), press WR STO key. LED will indicate . Then proceed with items 7 and 8 above to check data.
10. Turn the jig off to remove the connector (9 pin) PX04 of the jig.

4. ALIGNMENT INSTRUCTION

(1) Color Sync. (Subcarrier) Adjustment

1. Remove the back cover from digital TV.
2. Connect the connector jig (9 pin) to PX04.
3. Turn the jig on and LED indicates **E n d**.
If LED does not indicate, repeat the turning-on operation or repeat pressing RESET key until LED indicates **E n d**.
4. Turn digital TV on to press the video standard key on digital TV.
5. Receive a color broadcasting signal.
6. Press RED RTO key on the jig and LED indicates **0000**.
7. Press Subcarrier key on the jig and color in the picture flutters and LED indicates **09** **△△**. (△△: Data)
8. Press △(UP) or ▽(DOWN) key on the jig to slow down the color fluttering.
9. Press MOD CLR key on the jig and the color fluttering stops and LED indicates **0000**.
10. Wait for 10 seconds after item 9 above.
11. Press WRD key on the jig to check that LED indicates **00** **△△** and the data is set in one among 0A to 15.
When the data is not one among 0A to 15, adjust the Screen adjustment.
12. Press WRT STR key and LED indicates **E n d**.
13. Turn digital TV off.
14. Turn the jig off to remove the connector of the jig.
15. Turn digital TV on to check the picture for corrected one.
16. Mount the back cover to digital TV.

(2) Screen Adjustment

1. Perform items 1, 2, 3 and 4 in the Color Sync. (Subcarrier) adjustment.
2. Receive a broadcasting signal to warm up TV for 10 minutes.
3. Press RED RTO key on the jig and LED indicates **0000**.
4. Press Contrast key and LED indicates **17** **1A**.
5. Press 0 key on the jig twice. After checking LED indicates **0000**, press SET key.
6. Press MOD CLR key on the jig. After checking LED indicates **0000**, press Brightness key on the jig. LED indicates **18** **△△**. (△△: Data)
7. Press 0 key on the jig twice. After checking LED indicates **18** **000**, press SET key on the jig and the picture turns dark.
8. Press MOD CLR key and LED indicates **0000**.
Then adjust screen control so the retrace line is slightly seen on the screen with a resistor 75k ohm connected across TP47R and ground.
9. Remove the resistor 75k ohm to press STR key on the jig. LED indicates **E n d**.
10. After checking LED indicates **E n d**, press RED STO key on the jig. LED indicates **0000**.
11. Proceed with items 10, 11, 12, 13, 14, 15 and 16 in Color Sync. (Subcarrier) adjustment.

(3) Vertical Height Adjustment

1. Perform items 1, 2, 3, 4, 5 and 6 in Color Sync. (Subcarrier) adjustment.
2. Press Vertical Height key on the jig and LED indicates **25** **△△**.
3. Press △(UP) or ▽(DOWN) key on the jig for a normal height on picture. At this time the data should be the one among 56 to 64 ($5D \pm 7$). If the data is out of limit, check circuits.
4. Press MOD CLR key and LED indicates **0000**.
5. Proceed with the items 10, 11, 12, 13, 14, 15 and 16 in Color Sync. (Subcarrier) adjustment.

(4) AKB Loop Adjustment

1. Perform the items 1, 2, 3, 4, 5 and 6 in Color Sync. (Subcarrier) adjustment.
2. Perform the items 10, 11, 12, 13, 14, 15 and 16 of Color Sync. (Subcarrier) adjustment.

(5) Brightness Adjustment

1. Perform the items 1, 2, 3, 4, 5 and 6 in Color Sync. (Subcarrier) adjustment.
2. Press Brightness key of the jig and LED indicates **18** **△△**.
3. Press △(UP) or ▽(DOWN) key on the jig for a normal brightness on picture.
4. Press MOD CLR key on the jig and LED indicates **0000**.
5. Proceed with the items 10, 11, 12, 13, 14, 15 and 16 in Color Sync. (Subcarrier) adjustment.

(6) Adjustment of All Data in Every Adjusting Item (Correcting to the data preset in the factory)

1. Perform the items 1, 2, 3, 4 and 5 in Color Sync. (Subcarrier) Adjustment.
2. Press WR STO key on the jig.
3. Perform the items 7, 8 and 9 in Color Sync. (Subcarrier) Adjustment.
4. Perform the items 2, 3 and 4 in Vertical Height Adjustment.
5. Perform the items 2, 3 and 4 in Brightness Adjustment.
6. Perform the item 2 in AKB Loop Adjustment.

(7) Standard Picture Adjustment

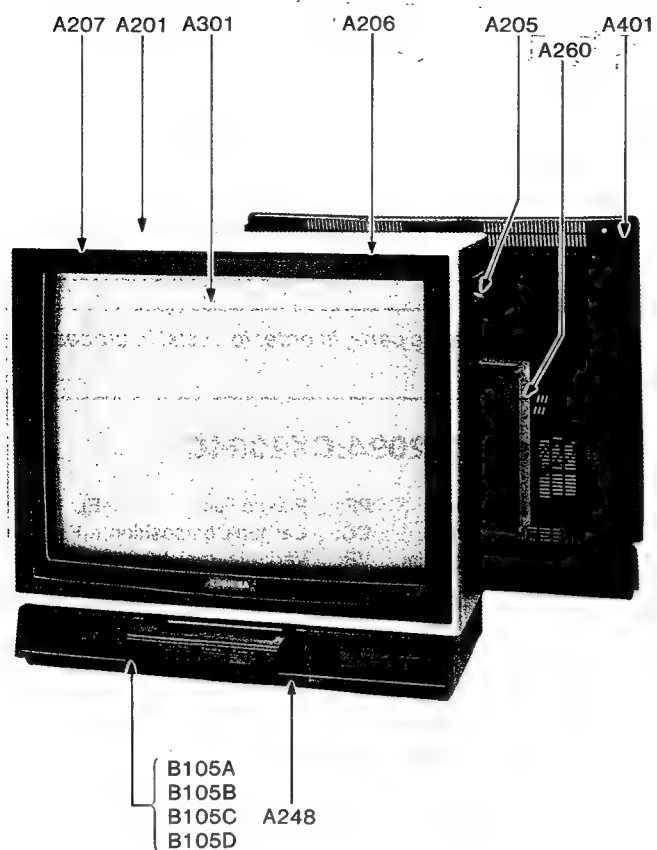
1. Perform the items 1, 2, 3, 4, 5 and 6 in Color Sync. (Subcarrier) Adjustment.
2. Press one key among Contrast, Brightness, Picture Sharpness, Color, Tint. Then watching a picture, tap △(UP) or ▽(DOWN) for the preferred picture. Press MOD CLR key on the jig after the above procedure. Repeat the above adjustment for every key.
3. After finishing all adjustment, press MOD CLR key on the jig.
4. Perform the items 10, 11, 12, 13, 14, 15 and 16 in Color Sync. (Subcarrier) Adjustment.

Note: Adjusting Standard Picture Adjustment changes the cursor position at standard.



Remote Control Transmitter View

CABINET VIEW AND REPLACEMENT PARTS LIST



LOCATION NUMBER	PART NUMBER	DESCRIPTION
A201	23807571	Front Cover
A205	23805710	Hand Hold
A206	23846753	Holder, Glass Mounting, Right
A207	23846752	Holder, Glass Mounting, Left
A248	23990610	Door, Front
A260	23990611	Door, Side
A301	23827721	Glass, Filter
A401	23990616	Back Cover
A701	23924647	Carton, Packaging, (CZ2094)
A701	23924609	Carton, Packaging, (CX2094C)
A702	23934934	Packing, 1 set
A901	23992927	Label, Model No., B/C

LOCATION NUMBER	PART NUMBER	DESCRIPTION
B105A	23832392	Control Case, Up
B105B	23832391	Control Case, Bottom
B105C	23832390	Control Box, Up
B105D	23832389	Control Box, Bottom
Y101	23991040	Owner's Manual, English
Y101	23994013	Owner's Manual, English, (CX2094C)
Y101A	23991033	Owner's Manual, French, (CX2094C)
Y107	23142707	Adaptor, Antenna, AD802J
Y134	23992801	Label, Model No., Carton, (CZ2094)
Y134	or 23992770	Label, Model No., Carton, (CX2094C)

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The shaded areas and Δ marks in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacement is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

Models CZ2094: CX2094C

ABBREVIATIONS: Capacitors CD: Ceramic Disk, PF: Plastic Film, EL: Electrolytic,
Resistors CF: Carbon Film, CC: Carbon Composition, MF: Metal Film,
OMF: Oxide Metal Film, VR: Variable Resistor, FR: Fusible Resistor.

(All CD and PF capacitors are $\pm 5\%$, 50V and all resistors, $\pm 5\%$, 1/6W unless otherwise noted.)

LOCATION NUMBER	PART NUMBER	DESCRIPTION
CAPACITORS		
C063	24753471	EL, 470 μ F, 16V
C065	24756479	EL, 4.7 μ F, 50V
C102	24232103	CD, 0.01 μ F, +80%, -20%
C103	24212102	CD, 1000pF, $\pm 10\%$
C104	24617994	EL, 0.47 μ F, 50V
C105	24591303	PF, 0.03 μ F
C107	24232103	CD, 0.01 μ F, +80%, -20%
C108	24756010	EL, 1 μ F, 50V
C109	24232103	CD, 0.01 μ F, +80%, -20%
C110	24756100	EL, 10 μ F, 50V
C116	24232103	CD, 0.01 μ F, +80%, -20%
C144	24436330	CD, 33pF
C171	24436758	CD, 0.75pF, ± 0.25 pF
C172	24436758	CD, 0.75pF, ± 0.25 pF
C175	24085031	EL, 1 μ F, 25V, Nonpolar
C176	24212102	CD, 1000pF, $\pm 10\%$
C177	24212102	CD, 1000pF, $\pm 10\%$
C178	24436150	CD, 15pF
C311	24796222	EL, 2200 μ F, 35V
C312	24796101	EL, 100 μ F, 35V
C313	24214561	CD, 560pF, $\pm 10\%$, 500V
C320	24214102	CD, 1000pF, $\pm 10\%$, 500V
C324	24795102	EL, 1000 μ F, 25V
C326	24617982	EL, 10 μ F, 16V
C328	24753330	EL, 33 μ F, 16V
C329	24617998	EL, 33 μ F, 16V
C330	24636100	EL, 10 μ F, 50V
C331	24693104	PF, 0.1 μ F, 100V
C332	24591563	PF, 0.056 μ F
C370	24756010	EL, 1 μ F, 50V
C371	24436561	CD, 560pF, $\pm 10\%$
C372	24754220	EL, 22 μ F, 50V
C373	24692272	PF, 2700pF
C374	24756010	EL, 1 μ F, 50V
C375	24753330	EL, 33 μ F, 16V
C409	24591563	PF, 0.056 μ F

LOCATION NUMBER	PART NUMBER	DESCRIPTION
C411	24214182	CD, 1800pF, $\pm 10\%$, 500V
C415	24215331	CD, 330pF, $\pm 10\%$, 1kV
C417	24214391	CD, 390pF, $\pm 10\%$, 500V
C420	24753102	EL, 1000 μ F, 16V
C424	24794471	EL, 470 μ F, 16V
C425	24833473	PF, 0.047 μ F, $\pm 10\%$, 200V
Δ C440	24095908	PF, 3300pF, 1.6kV
Δ C441	24095908	PF, 3300pF, 1.6kV
Δ C442	24828104	PF, 0.1 μ F, 200V
Δ C443	24828913	PF, 0.091 μ F, 200V
C445	24833223	PF, 0.022 μ F, $\pm 10\%$, 200V
C446	24750220	EL, 22 μ F, 250V
C448	24640992	EL, 33 μ F, 160V
C449	24794472	EL, 4700 μ F, 16V
C463	24212222	CD, 2200pF, $\pm 10\%$
C471	24756479	EL, 4.7 μ F, 50V
C472	24636100	EL, 10 μ F, 50V
C480	24232103	CD, 0.01 μ F, +80%, -20%
C481	24632101	EL, 100 μ F, 10V
C483	24753100	EL, 10 μ F, 50V
C600	24636010	EL, 1 μ F, 50V
C615	24756339	EL, 3.3 μ F, 50V
C616	24753222	EL, 2200 μ F, 50V
C617	24756100	EL, 10 μ F, 50V
C618	24756339	EL, 3.3 μ F, 50V
C619	24538224	PF, 0.22 μ F
C620	24756100	EL, 10 μ F, 50V
C621	24538224	PF, 0.22 μ F
C623	24756100	EL, 10 μ F, 50V
C624	24754222	EL, 2200 μ F, 25V
C625	24591332	PF, 3300pF
C626	24436470	CD, 47pF
C627	24436470	CD, 47pF
C628	24232103	CD, 0.01 μ F, +80%, -20%
C629	24753331	EL, 3300 μ F, 16V
C630	24617969	EL, 0.22 μ F, 50V
C631	24232102	CD, 1000pF, +80%, -20%
C632	24232103	CD, 0.01 μ F, +80%, -20%

LOCATION NUMBER	PART NUMBER	DESCRIPTION
C633	24436470	CD, 47pF
C634	24436101	CD, 100pF
C635	24538104	PF, 0.1μF
C636	24212222	CD, 2200pF, ±10%
C637	24212222	CD, 2200pF, ±10%
C638	24754101	EL, 100μF, 25V
C639	24754471	EL, 47μF, 25V
C640	24754471	EL, 47μF, 25V
C641	24538104	PF, 0.1μF
C642	24436101	CD, 100pF
C643	24692223	PF, 0.022μF
C644	24753101	EL, 100μF, 16V
C645	24754470	EL, 47μF, 25V
C646	24754470	EL, 47μF, 25V
C647	24753101	EL, 100μF, 16V
C648	24692223	PF, 0.022μF
C660	24212102	CD, 1000pF, ±10%
C661	24212182	CD, 1800pF
△C801	24095966	PF, 0.1μF, ±20%, AC125V
△C802	24094905	CD, 0.01μF, +80%, -20%, AC250V
△C803	24094905	CD, 0.01μF, +80%, -20%, AC250V
△C804	24094905	CD, 0.01μF, +80%, -20%, AC250V
△C805	24094905	CD, 0.01μF, +80%, -20%, AC250V
C821	24086970	EL, 3300μF, 35V
C822	24796222	EL, 2200μF, 35V
C823	24754470	EL, 47μF, 25V
C824	24794102	EL, 1000μF, 16V
C825	24212102	CD, 1000pF, ±10%
△C861	24095966	PF, 0.1μF, ±20%, AC125V
△C862	24094820	CD, 2200pF, ±20%, AC125V
△C863	24094820	CD, 2200pF, ±20%, AC125V
△C864	24094820	CD, 2200pF, ±20%, AC125V
△C865	24094820	CD, 2200pF, ±20%, AC125V
C866	24086975	EL, 220μF, 200V
C867	24095509	PF, 3600pF, 1600V
C868	24692303	PF, 0.03μF, 50V
C869	24206010	EL, 1μF, 50V
C870	24636479	EL, 4.7μF, 50V
C871	24212102	CD, 1000pF, ±10%
C872	24598242	PF, 2400pF
C873	24214181	CD, 180pF, ±10%, 500V
C874	24636470	EL, 47μF, 50V
C875	24232103	CD, 0.01μF, +80%, -20%
C876	24538474	PF, 0.47μF
C877	24630991	EL, 47μF, 25V
△C878	24094819	CD, 4700 pF, ±20%, AC125V
△C879	24094819	CD, 4700 pF, ±20%, AC125V
C880	24214331	CD, 330pF, ±10%, 500V
C881	24794221	EL, 220μF, 16V
C882	24086966	EL, 1000μF, 35V
C883	24436101	CD, 100pF
C884	24640973	EL, 100μF, 160V
△C891	24212222	CD, 2200pF, ±10%
△C892	24442271	CD, 270pF, ±10%, 2kV
C902	24211331	CD, 330pF, ±10%, 2kV
C903	24215102	CD, 1000pF, ±10%, 1kV
C907	24436561	CD, 560pF, ±10%
C908	24436561	CD, 560pF, ±10%
C909	24436561	CD, 560pF, ±10%
C910	24212331	CD, 330pF, ±10%
C911	24212331	CD, 330pF, ±10%

LOCATION NUMBER	PART NUMBER	DESCRIPTION
C912	24212331	CD, 330pF, ±10%
CA09	24212221	CD, 220pF, ±10%
CA19	24212221	CD, 220pF, ±10%
CA20	24232103	CD, 0.01μF, +80%, -20%
CA21	24232103	CD, 0.01μF, +80%, -20%
CA29	24436560	CD, 56pF
CA30	24753100	EL, 10μF, 16V
CA31	24232103	CD, 0.01μF, +80%, -20%
CA32	24436560	CD, 56pF
CA33	24232102	CD, 1000pF, ±10%
CA34	24538104	PF, 0.1μF
CA35	24538103	PF, 0.01μF
CA36	24212221	CD, 220pF, ±10%
CA37	24212102	CD, 1000pF, ±10%
CA40	24436101	CD, 100pF
CA41	24436101	CD, 100pF
CA42	24232103	CD, 0.01μF, +80%, -20%
CA43	24212102	CD, 1000pF, ±10%
CA44	24212391	CD, 390pF, ±10%
CA45	24232103	CD, 0.01μF, +80%, -20%
CA46	24232103	CD, 0.01μF, +80%, -20%
CA47	24753470	EL, 47μF, 16V
CA54	24212221	CD, 220pF, ±10%
CA79	24753470	EL, 47μF, 16V
CA80	24232103	CD, 0.01μF, +80%, -20%
CA81	24212102	CD, 1000pF, ±10%
CA82	24232103	CD, 0.01μF, +80%, -20%
CA83	24232103	CD, 0.01μF, +80%, -20%
CA84	24212221	CD, 220pF, ±10%
CA85	24212221	CD, 220pF, ±10%
CA86	24212221	CD, 220pF, ±10%
CA87	24212221	CD, 220pF, ±10%
CE02	24796221	EL, 220μF, 35V
CE12	24795102	EL, 1000μF, 25V
CE22	24633470	EL, 47μF, 16V
CE30	24232103	CD, 0.01μF, +80%, -20%
CE31	24757010	EL, 1μF
CE32	24636100	EL, 10μF, 50V
CE33	24636100	EL, 10μF, 50V
CG01	24753100	EL, 10μF, 16V
CG02	24598102	PF, 1000pF
CG03	24598471	PF, 470pF
CG04	24598471	PF, 470pF
CG05	24598241	PF, 240pF
CG06	24753100	EL, 10μF, 16V
CG07	24756010	EL, 1μF, 50V
CG09	24753100	EL, 10μF, 16V
CG18	24756010	EL, 1μF, 50V
CG21	24753221	EL, 220μF, 16V
CG22	24753100	EL, 10μF, 16V
CG23	24756478	EL, 0.47μF, 50V
CG24	24756010	EL, 1μF, 50V
CG25	24598122	PF, 0.012μF, 50V
CG26	24756479	EL, 4.7μF, 50V
CG27	24436221	CD, 220 pF
CG28	24436221	CD, 220 pF
CG33	24753220	EL, 22μF, 16V
CG34	24753100	EL, 10μF, 16V
CG35	24753220	EL, 22μF, 16V
CG36	24591332	PF, 3300pF
CG37	24591222	PF, 2200pF, 50V
CG38	24753100	EL, 10μF, 16V
CG39	24753471	EL, 470μF, 16V
CG40 (UG02)	24598102	PF, 1000pF
CG40 (U902)	24756339	EL, 3.3μF, 50V

LOCATION NUMBER	PART NUMBER	DESCRIPTION
CG41 (UG02)	24753100	EL, 10 μ F, 16V
CG41 (U902)	24756339	EL, 3.3 μ F, 50V
CG42 (UG02)	24753100	EL, 10 μ F, 16V
CG42 (U902)	24756339	EL, 3.3 μ F, 50V
CG43 (UG02)	24591272	PF, 2700pF
CG43 (U902)	24232103	CD, 0.01 μ F, +80%, -20%
CG44 (UG02)	24591102	PF, 1000pF
CG44 (U902)	24232103	CD, 0.01 μ F, +80%, -20%
CG45 (UG02)	24756478	EL, 0.47 μ F, 50V
CG45 (U902)	24232103	CD, 0.01 μ F, +80%, -20%
CG46	24756010	EL, 1 μ F, 50V
CG47	24436680	CD, 68pF
CG48	24756478	EL, 0.47 μ F, 50V
CG49	24756478	EL, 0.47 μ F, 50V
CG51	24617982	EL, 10 μ F, 16V
CG52	24756010	EL, 1 μ F, 50V
CG53	24617996	EL, 3.3 μ F
CG54	24591332	PF, 3300pF
CG55	24591222	PF, 2200pF, 50V
CG56	24591224	PF, 0.22 μ F
CG57	24591224	PF, 0.22 μ F
CG58	24756010	EL, 1 μ F, 50V
CG59	24591222	PF, 2200pF, 50V
CG60	24753100	EL, 10 μ F, 16V
CG61	24591472	PF, 4700pF
CG66	24232103	CD, 0.01 μ F, +80%, -20%
CG67	24232103	CD, 0.01 μ F, +80%, -20%
CG68	24756010	EL, 1 μ F, 50V
CG69	24756010	EL, 1 μ F, 50V
CG70	24617988	EL, 47 μ F, 16V
CG71	24591333	PF, 0.033 μ F
CG72	24591472	PF, 4700pF
CG73	24538474	PF, 0.47 μ F
CG74	24756010	EL, 1 μ F, 50V
CG75	24753101	EL, 100 μ F, 16V
CG76	24756100	EL, 10 μ F, 50V
CG77	24085023	EL, 10 μ F, 16V, Nonpolar
CG78	24591332	PF, 3300pF
CG79	24591472	PF, 4700pF
CG80	24753100	EL, 10 μ F, 16V
CG81	24591332	PF, 3300pF
CG82	24591103	PF, 0.01 μ F
CG83	24617967	EL, 2.2 μ F, 50V
CG84	24753221	EL, 220 μ F, 16V
CP01	24206010	EL, 1 μ F, 50V
CP02	24206010	EL, 1 μ F, 50V
CP03	24206010	EL, 1 μ F, 50V
CP04	24206010	EL, 1 μ F, 50V
CP05	24206010	EL, 1 μ F, 50V
CP06	24206010	EL, 1 μ F, 50V
CP07	24203100	EL, 10 μ F, 16V
CP08	24794471	EL, 470 μ F, 16V
CP09	24203100	EL, 10 μ F, 16V
CP10	24203220	EL, 22 μ F, 16V
CP11	24203100	EL, 10 μ F, 16V
CP12	24203100	EL, 10 μ F, 16V
CP13	24203100	EL, 10 μ F, 16V
CP14	24232103	CD, 0.01 μ F, +80%, -20%
CP15	24203100	EL, 10 μ F, 16V
CP16	24203330	EL, 33 μ F, 16V
CP18	24794471	EL, 470 μ F, 16V
CP22	24232103	CD, 0.01 μ F, +80%, -20%
CP23	24212101	CD, 100pF, \pm 10%
CP24	24206339	EL, 3.3 μ F, 50V
CP25	24206339	EL, 3.3 μ F, 50V

LOCATION NUMBER	PART NUMBER	DESCRIPTION
CP27	24206229	EL, 2.2 μ F, 50V
CP29	24206229	EL, 2.2 μ F, 50V
CP30	24206010	EL, 1 μ F, 50V
CP31	24206010	EL, 1 μ F, 50V
CP32	24436150	CD, 15pF
CP33	24203100	EL, 10 μ F, 16V
CP34	24206229	EL, 2.2 μ F, 50V
CP35	24206229	EL, 2.2 μ F, 50V
CP36	24232103	CD, 0.01 μ F, +80%, -20%
CP37	24794471	EL, 470 μ F, 16V
CP38	24203220	EL, 22 μ F, 16V
CP39	24206100	EL, 10 μ F, 50V
CP40	24206339	EL, 3.3 μ F, 50V
CP41	24206339	EL, 3.3 μ F, 50V
CP43	24203100	EL, 1 μ F, 16V
CP45	24203100	EL, 1 μ F, 16V
CP46	24203100	EL, 1 μ F, 16V
CP47	24203100	EL, 1 μ F, 16V
CP48	24206339	EL, 3.3 μ F, 50V
CP49	24232103	CD, 0.01 μ F, +80%, -20%
CP50	24436101	CD, 100pF
CP51	24436471	CD, 470pF
CP52	24232103	CD, 0.01 μ F, +80%, -20%
CP60	24206229	EL, 2.2 μ F, 50V
CP61	24206229	EL, 2.2 μ F, 50V
CP62	24206229	EL, 2.2 μ F, 50V
CP63	24206229	EL, 2.2 μ F, 50V
CP64	24436151	CD, 150pF
CP65	24436151	CD, 150pF
CP66	24436151	CD, 150pF
CP67	24436180	CD, 18pF
CP70	24794221	EL, 220 μ F, 16V
CP71	24232103	CD, 0.01 μ F, +80%, -20%
CP72	24203470	EL, 47 μ F, 16V
CP73	24636478	EL, 0.47 μ F, 50V
CP74	24206229	EL, 2.2 μ F, 50V
CP75	24206229	EL, 2.2 μ F, 50V
CP76	24794101	EL, 100 μ F, 16V
CP77	24794221	EL, 220 μ F, 16V
CP78	24794101	EL, 100 μ F, 16V
CP151	24203470	EL, 47 μ F, 16V
CP152	24203470	EL, 47 μ F, 16V
CP153	24206100	EL, 10 μ F, 50V
CP154	24206100	EL, 10 μ F, 50V
CP155	24206100	EL, 10 μ F, 50V
CP156	24206100	EL, 10 μ F, 50V
CP157	24232103	CD, 0.01 μ F, +80%, -20%
CP172	24436121	CD, 120pF
CP180	24206010	EL, 1 μ F, 50V
CP181	24203470	EL, 47 μ F, 16V
CP182	24232103	CD, 0.01 μ F, +80%, -20%
CP183	24203470	EL, 47 μ F, 16V
CP184	24436101	CD, 100pF
CP185	24232103	CD, 0.01 μ F, +80%, -20%
CP186	24436160	CD, 16pF
CP187	24436160	CD, 16pF
CP188	24205479	EL, 4.7 μ F, 35V
CP189	24232103	CD, 0.01 μ F, +80%, -20%
CP190	24203470	EL, 47 μ F, 16V
CP191	24205479	EL, 4.7 μ F, 35V
CP192	24232103	CD, 0.01 μ F, +80%, -20%
CP193	24591103	PF, 0.01 μ F
CP194	24436180	CD, 18pF
CP195	24436560	CD, 56pF
CP196	24436180	CD, 18pF

LOCATION NUMBER	PART NUMBER	DESCRIPTION
CP197	24232103	CD, 0.01 μ F, +80%, -20%
CP198	24212102	CD, 1000pF, \pm 10%
CR01	24501222	PF, 2200pF
CR02	24538683	PF, 0.068 μ F
CR03	24633100	EL, 10 μ F, 16V
CR04	24633330	EL, 33 μ F, 16V
CR05	24633100	EL, 10 μ F, 16V
CR06	24633470	EL, 47 μ F, 16V
CR07	24692222	PF, 2200pF
CX03	24232103	CD, 0.01 μ F, +80%, -20%
CX04	24436101	CD, 100pF
CX05	24796220	CD, 100pF
CX06	24232103	CD, 0.01 μ F, +80%, -20%
CX07	24232103	CD, 0.01 μ F, +80%, -20%
CX08	24232103	CD, 0.01 μ F, +80%, -20%
CX09	24085990	EL, 2.2 μ F, 35V
CX10	24232103	CD, 0.01 μ F, +80%, -20%
CX11	24633470	EL, 47 μ F, 16V
CX13	24633470	EL, 47 μ F, 16V
CX14	24232103	CD, 0.01 μ F, +80%, -20%
CX15	24851104	CD, 0.1 μ F, \pm 10%, 25V
CX16	24633101	EL, 100 μ F, 16V
CX17	24436560	CD, 56pF
CX18	24633330	EL, 33 μ F, 16V
CX19	24633100	EL, 10 μ F, 16V
CX20	24232103	CD, 0.01 μ F, +80%, -20%
CX21	24232103	CD, 0.01 μ F, +80%, -20%
CX24	24436101	CD, 100pF
CX26	24436101	CD, 100pF
CX28	24794470	EL, 47 μ F, 16V
CX29	24633100	EL, 10 μ F, 16V
CX30	24436300	CD, 30pF
CX31	24436300	CD, 30pF
CX32	24232103	CD, 0.01 μ F, +80%, -20%
CX33	24436330	CD, 33pF
CX34	24232103	CD, 0.01 μ F, +80%, -20%
CX35 (U902)	24232103	CD, 0.01 μ F, +80%, -20%
CX35 (UX01)	24232103	CD, 0.01 μ F, +80%, -20%
CX36 (U902)	24755220	EL, 22 μ F, 35V
CX36 (UX01)	24635220	EL, 22 μ F, 35V
CX37	24633221	EL, 220 μ F, 16V
CX38	24436221	CD, 220 pF
CX39	24232103	CD, 0.01 μ F, +80%, -20%
CX40	24633100	EL, 10 μ F, 16V
CX41	24851104	CD, 0.1 μ F, 25V
CX42	24851104	CD, 0.1 μ F, 25V
CX43	24851104	CD, 0.1 μ F, 25V
CX44	24436160	CD, 16pF
CX45	24232103	CD, 0.01 μ F, +80%, -20%
CX46	24538104	PF, 0.1 μ F
CX47	24633221	EL, 220 μ F, 16V
CX48	24851104	CD, 0.1 μ F, \pm 10%, 25V
CX49	24591513	PF, 0.051 μ F
CX50	24794470	EL, 47 μ F, 16V
CX60	24212102	CD, 1000pF, \pm 10%
CX61	24436121	CD, 120pF
CX62	24436100	CD, 10pF
CX63	24436100	CD, 10pF
CX64	24436100	CD, 10pF
CX65	24633100	EL, 10 μ F, 16V
CX66	24436101	CD, 100 pF
CX67	24436101	CD, 100 pF
CX69	24232103	CD, 0.1 μ F, +80%, -20%
CX70	24633470	EL, 47 μ F, 16V
CX71	24436121	CD, 120pF

LOCATION NUMBER	PART NUMBER	DESCRIPTION
CX73	24633470	EL, 47 μ F, 16V
CX77	24436101	CD, 100pF
CX81	24212222	CD, 2200pF, \pm 10%
CX85	24232103	CD, 0.01 μ F, +80%, -20%
CX90	24212102	CD, 1000pF, \pm 10%
CX99	24215102	CD, 1000pF, 1kV
CY01	24753100	EL, 10 μ F, 16V
CY05	24436300	CD, 30pF
CY06	24538393	PF, 0.039 μ F, 50V
CY07	24232103	CD, 0.01 μ F, +80%, -20%
CY08	24756478	EL, 0.47 μ F, 50V
CY09	24436330	CD, 33pF
CY10	24436130	CD, 13pF
CY11	24436820	CD, 82pF
CY12	24232103	CD, 0.01 μ F, +80%, -20%
CY13	24436300	CD, 30pF
CY14	24436120	CD, 12pF
CY15	24232103	CD, 0.01 μ F, +80%, -20%
CY16	24756478	EL, 0.47 μ F, 50V
CY17	24232103	CD, 0.01 μ F, +80%, -20%
CY18	24212102	CD, 1000pF, \pm 10%
CY19	24436560	CD, 56pF
CY20	24232103	CD, 0.01 μ F, +80%, -20%
CY22	24436271	CD, 270pF
CY23 (U902)	24436101	CD, 100pF
CY23 (UX01)	24591133	PF, 0.013 μ F
CY24 (U902)	24753221	EL, 220 μ F, 16V
CY24 (UX01)	24538153	PF, 0.015 μ F
CY25 (U902)	24085023	EL, 10 μ F, 16V, NP
CY25 (UX01)	24436221	CD, 220 pF
CY26	24538103	PF, 0.01 μ F
CY28	24633101	EL, 100 μ F, 16V
CY29	24636010	EL, 1 μ F, 50V
CY30	24538103	PF, 0.01 μ F
CY31	24436271	CD, 270pF
CY31	24538224	PF, 0.22 μ F
CY32	24436391	CD, 390pF
CY33	24636478	EL, 0.47 μ F, 50V
CY34	24436561	CD, 560 pF
CY35	24538104	PF, 0.1 μ F
CY36	24591182	PF, 1800pF
CY37	24232103	CD, 0.01 μ F, +80%, -20%
CY39	24359680	CD, 68pF
CY40	24636478	EL, 0.47 μ F, 50V
CY42	24359181	CD, 180pF
CY43	24232103	CD, 0.01 μ F, +80%, -20%
CY44	24436101	CD, 100pF
CY51	24094541	Variable Capacitor, 2.5 to 23pF
CY52	24094941	Variable Capacitor, 2.5 to 55pF
CY61	24633100	EL, 10 μ F, 16V
CY62	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY63	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY64	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY65	24794470	EL, 47 μ F, 16V
CY66	24795330	EL, 33 μ F, 25V
CY67	24633330	EL, 33 μ F, 16V
CY71	24436271	CD, 270pF
CY72	24436821	CD, 820pF
CY73	24436271	CD, 270pF
CY74	24436391	CD, 390pF
CY75	24636229	EL, 2.2 μ F, 50V
CY76	24636229	EL, 2.2 μ F, 50V
CY77	24232103	CD, 0.01 μ F, +80%, -20%

LOCATION NUMBER	PART NUMBER	DESCRIPTION
CY78	24232103	CD, 0.01 μ F, +80%, -20%
CY79	24085990	EL, 2.2 μ F, 25V
CY80	24436330	CD, 33pF
CY81	24633101	EL, 100 μ F, 16V
CY82	24232103	CD, 0.01 μ F, +80%, -20%
CY89	24232103	CD, 0.01 μ F, +80%, -20%
CY90	24232103	CD, 0.01 μ F, +80%, -20%
CY93	24232103	CD, 0.01 μ F, +80%, -20%
CY95	24232103	CD, 0.01 μ F, +80%, -20%
CY96	24232103	CD, 0.01 μ F, +80%, -20%
CY97	24232103	CD, 0.01 μ F, +80%, -20%
CY98	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY99	24232103	CD, 0.01 μ F, +80%, -20%
CY100	24538224	PF, 0.22 μ F
CY102	24232103	CD, 0.01 μ F, +80%, -20%
CY103	24232103	CD, 0.01 μ F, +80%, -20%
CY104	24232103	CD, 0.01 μ F, +80%, -20%
CY105	24232103	CD, 0.01 μ F, +80%, -20%
CY106	24232103	CD, 0.01 μ F, +80%, -20%
CY107	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY108	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY109	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY110	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY111	24851104	CD, 0.1 μ F, \pm 10%, 25V
CY112	24232103	CD, 0.01 μ F, +80%, -20%
CY113	24232103	CD, 0.01 μ F, +80%, -20%
CY114	24232103	CD, 0.01 μ F, +80%, -20%
CY115	24232103	CD, 0.01 μ F, +80%, -20%
CY116	24232103	CD, 0.01 μ F, +80%, -20%
CY117	24232103	CD, 0.01 μ F, +80%, -20%
CY118	24232103	CD, 0.01 μ F, +80%, -20%
CY119	24232103	CD, 0.01 μ F, +80%, -20%
CY120	24232103	CD, 0.01 μ F, +80%, -20%
CY121	24232103	CD, 0.01 μ F, +80%, -20%
CY123	24436101	CD, 100pF
CY124	24232103	CD, 0.01 μ F, +80%, -20%
CY125	24232103	CD, 0.01 μ F, +80%, -20%
CY126	24232103	CD, 0.01 μ F, +80%, -20%
CY136	24436331	CD, 330pF
CY137	24232103	CD, 0.01 μ F, +80%, -20%
RESISTORS		
R062	24366683	CF, 68k ohm
R101	24366222	CF, 2200 ohm
R105	24366392	CF, 3900 ohm
R106	24366511	CF, 510 ohm
R107	24366201	CF, 200 ohm
R119	24366221	CF, 220 ohm
R141	24366331	CF, 330 ohm
R145	24366202	CF, 2200 ohm
R146	24360182	CF, 1800 ohm, 1/8W
R147	24366132	CF, 1300 ohm
R148	24366222	CF, 2200 ohm
R149	24366202	CF, 2K ohm
R152	24066953	VR, 5K ohm, 1/10W
R158	24066947	VR, 500K ohm, 1/10W
R161	24366751	CF, 750 ohm
R170	24366104	CF, 100k ohm
R172	24380102	CF, 1k ohm, 1/8W
R173	24366102	CF, 1k ohm
R174	24366333	CF, 33k ohm
R175	24366333	CF, 33k ohm
R202	24366242	CF, 2400 ohm
R218	24366683	CF, 68k ohm
R227	24366563	CF, 56k ohm

LOCATION NUMBER	PART NUMBER	DESCRIPTION
R323	24983159	MF, 1.5 ohm, 1/2W
R324	24360682	CF, 6800 ohm, 1/8W
R325	24360682	CF, 6800 ohm, 1/8W
R327	24982369	MF, 3.6 ohm, 1/2W
R328	24366562	CF, 5600 ohm
R329	24366392	CF, 3900 ohm
R330	24366102	CF, 1k ohm
R335	24360113	CF, 11k ohm
Δ R336	24554751	OMF, 750 ohm, 2W
R371	24366391	CF, 390 ohm
R372	24366471	CF, 470 ohm
R373	24366304	CF, 300k ohm
R374	24366563	CF, 56k ohm
R375	24366122	CF, 1200 ohm
R376	24366272	CF, 2700 ohm
R377	24366362	CF, 3600 ohm
R378	24366103	CF, 10k ohm
R380	24366152	CF, 1500 ohm
R381	24366473	CF, 47k ohm
R411	24360330	CF, 33 ohm
Δ R416	24383113	OMF, 11k ohm, 2W
Δ R418	24383103	OMF, 10k ohm, 2W
R419	24552101	OMF, 100 ohm, 1/2W
R420	24552271	OMF, 270 ohm, 1/2W
Δ R421	24531270	FR, 27 ohm, 1/2W
Δ R423	24531240	FR, 24 ohm, 1/2W
R425	24946332	CC, 3300 ohm, \pm 10%, 1/2W
R430	24366102	CF, 1k ohm
R431	24366562	CF, 5600 ohm
R435	24366563	CF, 56k ohm
R441	24552102	OMF, 1k ohm, 1/2W
R444	24322109	MF, 1 ohm, 1W
R448	24322139	MF, 1.3 ohm, 1W
R449	24322139	MF, 1.3 ohm, 1W
R472	24552270	OMF, 27 ohm, 1/2W
Δ R475	24367431	CF, 430 ohm, \pm 2%
R476	24366823	CF, 82k ohm
R477	24366243	CF, 24k ohm
Δ R478	24327133	MF, 13k ohm, \pm 1%, 1/4W
Δ R482	24327752	MF, 7500 ohm, \pm 1%, 1/4W
Δ R483	24366392	CF, 3900 ohm
Δ R484	24360473	CF, 47k ohm, 1/8W
R485	24366333	CF, 33k ohm
R486	24366103	CF, 10k ohm
R487	24366752	CF, 7500 ohm
R488	24366222	CF, 2200 ohm
R489	24366103	CF, 10k ohm
R613	24552390	OMF, 39 ohm, 1/2W
R618	24366562	CF, 5600 ohm
R620	24366562	CF, 5600 ohm
R621	24366392	CF, 3900 ohm
R622	24366152	CF, 1500 ohm
R623	24366102	CF, 1k ohm
R625	24366824	CF, 820k ohm
R626	24366162	CF, 1600 ohm
R627	24360331	CF, 330 ohm, 1/8W
R628	24366102	CF, 1k ohm
R629	24366103	CF, 10k ohm
R630	24982479	MF, 4.7 ohm, 1/2W
R631	24366153	CF, 15k ohm
R632	24366153	CF, 15k ohm
R633	24366222	CF, 2200 ohm
R634	24366222	CF, 2200 ohm
R635	24360102	CF, 1k ohm, 1/8W
R636	24982479	MF, 4.7 ohm, 1/2W

LOCATION NUMBER	PART NUMBER	DESCRIPTION
R637	24366331	CF, 330 ohm
R638	24366333	CF, 33k ohm
R639	24366333	CF, 33k ohm
R640	24366331	CF, 330 ohm
R645	24366273	CF, 27k ohm
R646	24366273	CF, 27k ohm
R665	24942331	CC, 330 ohm, 1/2W
R666	24942331	CC, 330 ohm, 1/2W
R667	24360103	CF, 10k ohm, 1/8W
R668	24360103	CF, 10k ohm, 1/8W
R669	24360750	CF, 75 ohm
R805	24946105	CC, 1M ohm, $\pm 10\%$, 1/2W
△R808	24000862	PTC, Thermistor, 7 ohm, $\pm 20\%$
△R810	24007951	Cement, 1.5 ohm, $\pm 10\%$, 7W
R821	24552152	OMF, 1500 ohm, 1/2W
△R822	24007952	Cement, 6.8 ohm, 5W
△R851	24061672	VR, 500 ohm, 1/8W
△R860	24007942	Cement, 180 ohm, 5W
R861	24552361	OMF, 360 ohm, 1/2W
R863	24552100	OMF, 10 ohm, 1/2W
R864	24366362	CF, 3600 ohm
R865	24360100	CF, 10k ohm, 1/8W
R866	24553273	OMF, 27k ohm, 1W
R867	24553273	OMF, 27k ohm, 1W
R868	24398274	CF, 270k ohm, $\pm 2\%$
R869	24327154	CF, 150k ohm, $\pm 1\%$, 1/4W
R870	24321758	OMF, 0.75 ohm, 1/2W
R871	24321308	OMF, 0.3 ohm, 1/2W
R872	24366361	CF, 360 ohm
△R873	24514120	Cement, 12 ohm, 5W
R874	24366472	CF, 4700 ohm
R875	24366102	CF, 1k ohm
R876	24552390	OMF, 39 ohm, 1/2W
R877	24366393	CF, 39k ohm
R878	24366112	CF, 1100 ohm
R879	24327471	MF, 470 ohm, $\pm 2\%$, 1/4W
R880	24552182	OMF, 1800 ohm, 1/2W
△R881	24003989	MF, 3900 ohm, $\pm 2\%$, 1/4W
△R882	24327162	CF, 1600 ohm, $\pm 1\%$, 1/4W
R883	24366302	CF, 3k ohm
R884	24983519	MF, 5.1 ohm, 1W
R885	24552821	OMF, 820 ohm, 1/2W
R886	24553473	OMF, 47k ohm, 1W
△R887	24360121	CF, 120 ohm, 1/8W
R907	24380100	CF, 10 ohm, 1/8W
R908	24380100	CF, 10 ohm, 1/8W
R909	24380100	CF, 10 ohm, 1/8W
R913	24380161	CF, 160 ohm, 1/8W
R914	24380161	CF, 160 ohm, 1/8W
R915	24380161	CF, 160 ohm, 1/8W
△R916	24383153	OMF, 15k ohm, 2W
△R917	24383153	OMF, 15k ohm, 2W
△R918	24383153	OMF, 15k ohm, 2W
R919	24360222	CF, 2200 ohm, 1/8W
△R920	24000884	FR, 3 ohm, 1W
R921	24360222	CF, 2200 ohm, 1/8W
R922	24946272	CC, 2.7k ohm, $\pm 10\%$, 1/2W
R923	24946272	CC, 2.7k ohm, $\pm 10\%$, 1/2W
R924	24946272	CC, 2.7k ohm, $\pm 10\%$, 1/2W
R926	24946102	CC, 1k ohm, $\pm 10\%$, 1/2W
R927	24360222	CF, 2200 ohm, 1/8W
△R960	24554113	OMF, 11k ohm, 2W
△R961	24554113	OMF, 11k ohm, 2W
△R962	24554113	OMF, 11k ohm, 2W
RA01	24366103	CF, 10k ohm

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RA02	24366103	CF, 10k ohm
RA03	24366103	CF, 10k ohm
RA04	24366103	CF, 10k ohm
RA05	24366102	CF, 1k ohm
RA06	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA09	24366102	CF, 1k ohm
RA10	24366102	CF, 1k ohm
RA11	24366102	CF, 1k ohm
RA12	24366102	CF, 1k ohm
RA13	24366102	CF, 1k ohm
RA14	24360102	CF, 1k ohm, 1/8W
RA15	24360103	CF, 10k ohm, 1/8W
RA16	24360103	CF, 10k ohm, 1/8W
RA17	24360103	CF, 10k ohm, 1/8W
RA18	24360103	CF, 10k ohm, 1/8W
RA19	24360102	CF, 1k ohm, 1/8W
RA20	24360102	CF, 1k ohm, 1/8W
RA21	24360102	CF, 1k ohm, 1/8W
RA22	24366103	CF, 10k ohm
RA23	24366102	CF, 1k ohm
RA24	24366102	CF, 1k ohm
RA25	24366102	CF, 1k ohm
RA26	24360102	CF, 1k ohm, 1/8W
RA27	24366102	CF, 1k ohm
RA30	24366820	CF, 82 ohm
RA31	24360562	CF, 5600 ohm, 1/8W
RA32	24366754	CF, 750k ohm
RA33	24366561	CF, 560 ohm
RA34	24366152	CF, 1500 ohm
RA35	24366181	CF, 180 ohm
RA36	24366273	CF, 27k ohm
RA37	24366103	CF, 10k ohm
RA38	24366124	CF, 120k ohm
RA39	24366222	CF, 2200 ohm
RA40	24360102	CF, 1k ohm, 1/8W
RA41	24366102	CF, 1k ohm
RA42	24366102	CF, 1k ohm
RA43	24366102	CF, 1k ohm
RA44	24366102	CF, 1k ohm
RA45	24360102	CF, 1k ohm, 1/8W
RA60	24366103	CF, 10k ohm
RA61	24366622	CF, 6200 ohm
RA62	24366473	CF, 47k ohm
RA63	24366622	CF, 6200 ohm
RA64	24366473	CF, 47k ohm
RA65	24360101	CF, 100 ohm
RA66	24360273	CF, 27k ohm, 1/8W
RA67	24366124	CF, 120k ohm
RA68	24360822	CF, 8200 ohm
RA69	24360822	CF, 8200 ohm
RA70	24366104	CF, 100k ohm
RA71	24360273	CF, 27k ohm, 1/8W
RA72	24366124	CF, 120k ohm
RA73	24360102	CF, 1k ohm, 1/8W
RA74	24360103	CF, 10k ohm, 1/8W
RA76	24366104	CF, 100k ohm
RA77	24360153	CF, 15k ohm, 1/8W
RA78	24366472	CF, 4700 ohm
RA79	24366273	CF, 27k ohm
RA80	24366103	CF, 10k ohm
RA82	24366103	CF, 10k ohm
RA83	24366103	CF, 10k ohm
RA84	24360102	CF, 1k ohm, 1/8W

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RA85	24366102	CF, 1k ohm
RA86	24360103	CF, 10k ohm, 1/8W
RA87	24360103	CF, 10k ohm, 1/8W
RA88	24366103	CF, 10k ohm
RA89	24366103	CF, 10k ohm
RA90	24366103	CF, 10k ohm
RA93	24360103	CF, 10k ohm, 1/8W
RA94	24360103	CF, 10k ohm, 1/8W
RA95	24360333	CF, 33k ohm, 1/8W
RA96	24366101	CF, 100 ohm
RA97	24366101	CF, 100 ohm
RA98	24366103	CF, 10k ohm
RA99	24366103	CF, 10k ohm
RA130	24360202	CF, 2k ohm, 1/8W
RB36	24366472	CF, 4700 ohm
RB37	24366222	CF, 2200 ohm
RB38	24366472	CF, 4700 ohm
RB61	24360333	CF, 33k ohm, 1/8W
RB62	24552470	OMF, 47 ohm, 1/2W
RB66	24360103	CF, 10k ohm, 1/8W
RB68	24360623	CF, 62k ohm
RE06	24366103	CF, 10k ohm
RE07	24366102	CF, 1k ohm
RE08	24366103	CF, 10k ohm
△RE10	24383201	OMF, 200 ohm, 2W
△RE11	24554151	OMF, 150 ohm, 2W
RE13	24552302	OMF, 3k ohm
△RE14	24554151	OMF, 150 ohm, 2W
△RE17	24384560	OMF, 56 ohm, 3W
△RE30	24554682	OMF, 6800 ohm, 2W
RE31	24366751	CF, 750 ohm
RE32	24366751	CF, 750 ohm
RE35	24553273	OMF, 27k ohm, 1W
RE36	24552150	OMF, 15 ohm, 1/2W
RE37	24366560	CF, 56 ohm
RE77	24366103	CF, 10k ohm
RG01	24360101	CF, 100 ohm, 1/8W
RG02	24360272	CF, 2700 ohm, 1/8W
RG03	24360123	CF, 12k ohm, 1/8W
RG04	24360432	CF, 4300 ohm, 1/8W
RG05	24360562	CF, 5600 ohm, 1/8W
RG06	24360432	CF, 4300 ohm, 1/8W
RG07	24360391	CF, 390 ohm, 1/8W
RG08	24360182	CF, 1800 ohm, 1/8W
RG09	24360202	CF, 2k ohm, 1/8W
RG10	24360563	CF, 56k ohm, 1/8W
RG11	24360563	CF, 56k ohm, 1/8W
RG12	24360472	CF, 4700 ohm, 1/8W
RG13	24360823	CF, 82k ohm, 1/8W
RG14	24360101	CF, 100 ohm, 1/8W
RG15	24360823	CF, 82k ohm, 1/8W
RG16	24360272	CF, 2700 ohm, 1/8W
RG22	24366101	CF, 100 ohm
RG23	24366102	CF, 1k ohm
RG24	24366912	CF, 9100 ohm
RG25	24366823	CF, 82k ohm
RG26	24380222	CF, 2200 ohm, 1/8W
RG27	24366332	CF, 3300 ohm
RG28	24366362	CF, 3600 ohm
RG29	24366102	CF, 1k ohm
RG30	24366104	CF, 100k ohm
RG32	24366102	CF, 1k ohm
RG33	24366432	CF, 4300 ohm
RG34	24366562	CF, 5600 ohm
RG35	24366103	CF, 10k ohm

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RG36	24366223	CF, 22k ohm
RG37	24366223	CF, 22k ohm
RG38	24366563	CF, 56k ohm
RG39	24366104	CF, 100k ohm
RG40	24366562	CF, 5600 ohm
RG41	24366563	CF, 56k ohm
RG42	24380103	CF, 10k ohm, 1/8W
RG43	24366332	CF, 3300 ohm
RG44	24366184	CF, 180k ohm
RG45	24366184	CF, 180k ohm
RG46	24380184	CF, 180k ohm
RG47	24380362	CF, 3600 ohm, 1/8W
RG48	24366332	CF, 3300 ohm
RG49	24366102	CF, 1k ohm
RG51	24066915	VR, 2k ohm, 0.1W
RG52	24066926	VR, 10k ohm, 0.1W
RG53	24066928	VR, 2k ohm, 0.1W
RG54	24066928	VR, 2k ohm, 0.1W
RG55	24066927	VR, 5k ohm, 0.1W
RG56	24066927	VR, 5k ohm, 0.1W
RG57	24066927	VR, 5k ohm, 0.1W
RG58	24066925	VR, 50k ohm, 0.1W
RG60	24380333	CF, 33k ohm, 1/8W
RG61	24366102	CF, 1k ohm
RG62	24366151	CF, 150 ohm
RG63	24366332	CF, 3300 ohm
RG64	24366102	CF, 1k ohm
RG65	24366562	CF, 5600 ohm
RG66	24380242	CF, 2400 ohm, 1/8W
RG67	24380103	CF, 10k ohm, 1/8W
RG68	24380561	CF, 560 ohm
RG69	24380561	CF, 560 ohm
RG70	24380103	CF, 10k ohm, 1/8W
RG71	24366332	CF, 3300 ohm
RG72	24366561	CF, 560 ohm
RG73	24380102	CF, 1k ohm, 1/8W
RG74	24366562	CF, 5600 ohm
RG75	24366103	CF, 10k ohm
RG76	24380103	CF, 10k ohm, 1/8W
RG77	24380333	CF, 33k ohm, 1/8W
RG78	24366221	CF, 220 ohm
RG79	24366104	CF, 100k ohm
RG80	24366103	CF, 10k ohm
RG81	24366103	CF, 10k ohm
RG82	24380683	CF, 68k ohm, 1/8W
RG83	24366103	CF, 10k ohm
RG84	24380223	CF, 22k ohm, 1/8W
RG85	24366123	CF, 12k ohm
RG86	24380103	CF, 10k ohm, 1/8W
RG87	24366102	CF, 1k ohm
RG89	24376180	CF, 18 ohm, 1/2W
RG90	24366362	CF, 3600 ohm
RG91	24380184	CF, 180k ohm
RG95	24366333	CF, 33k ohm
RG97	24366102	CF, 1k ohm
RG100	24366272	CF, 2700 ohm
RG104	24366103	CF, 10k ohm
RG105	24366823	CF, 82k ohm
RG106	24366104	CF, 100k ohm
RG107	24366163	CF, 16k ohm
RG108	24366202	CF, 2200 ohm
RG109	24366103	CF, 10k ohm
RG110	24366103	CF, 10k ohm
RG111	24366103	CF, 10k ohm
RG112	24366133	CF, 13k ohm

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RG113	24366133	CF, 13k ohm
RG114	24366133	CF, 13k ohm
RG115	24366103	CF, 10k ohm
RG116	24366153	CF, 15k ohm
RG117	24380182	CF, 1800 ohm
RG118	24380332	CF, 3300 ohm
RG119	24380562	CF, 5600 ohm, 1/8W
RG121	24360561	CF, 560 ohm
RG122	24380102	CF, 1k ohm, 1/8W
RG123	24380102	CF, 1k ohm, 1/8W
RG124	24366561	CF, 560 ohm
RG127	24366104	CF, 100k ohm
RG128	24366104	CF, 100k ohm
RG130	24366472	CF, 4700 ohm
RG131	24380223	CF, 22k ohm, 1/8W
RG132	24366472	CF, 4700 ohm
RG133	24366151	CF, 150 ohm
RG134	24366332	CF, 3300 ohm
RG135	24366393	CF, 39k ohm
RG136	24366272	CF, 2700 ohm
RG137	24327102	CF, 1k ohm, $\pm 1\%$, 1/4W
RG138	24376221	CF, 220 ohm, 1/2W
RG139	24366222	CF, 2200 ohm
RG140	24366182	CF, 1800 ohm
RG141	24366103	CF, 10k ohm
RG142	24366242	CF, 2400 ohm
RG144	24380512	CF, 5100 ohm
RG145	24366472	CF, 4700 ohm
RG146	24366472	CF, 4700 ohm
RG147	24380151	CF, 150 ohm, 1/8W
RG151	24380273	CF, 27k ohm
RG152	24380332	CF, 3300 ohm
RG153	24366331	CF, 330 ohm
RG154	24366911	CF, 910 ohm
RG155	24366683	CF, 68k ohm
RG156	24380103	CF, 10k ohm, 1/8W
RG196	24366103	CF, 10k ohm
RG197	24366103	CF, 10k ohm
RG198	24366103	CF, 10k ohm
RG199	24366103	CF, 10k ohm
RG200	24366123	CF, 12k ohm
RG201	24366123	CF, 12k ohm
RG202	24366123	CF, 12k ohm
RG203	24366473	CF, 47k ohm
RG204	24366473	CF, 47k ohm
RG205	24366473	CF, 47k ohm
RG206	24366472	CF, 4700 ohm
RG207	24366472	CF, 4700 ohm
RG208	24366472	CF, 4700 ohm
RG209	24366272	CF, 2700 ohm
RG210	24366272	CF, 2700 ohm
RG211	24366272	CF, 2700 ohm
RP01	24366183	CF, 18k ohm
RP02	24360183	CF, 18k ohm, 1/8W
RP03	24360183	CF, 18k ohm, 1/8W
RP04	24366183	CF, 18k ohm
RP05	24360183	CF, 18k ohm, 1/8W
RP06	24360183	CF, 18k ohm, 1/8W
RP07	24366750	CF, 75 ohm
RP08	24552331	OMF, 330 ohm, 1/2W
RP09	24552471	OMF, 470 ohm, 1/2W
RP10	24366102	CF, 1k ohm
RP17	24366101	CF, 100 ohm
RP18	24366750	CF, 75 ohm
RP20	24366101	CF, 100 ohm

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RP21	24366113	CF, 11k ohm
RP22	24366473	CF, 47k ohm
RP23	24366102	CF, 1k ohm
RP24	24366240	CF, 24 ohm
RP26	24366101	CF, 100 ohm
RP27	24366472	CF, 4700 ohm
RP29	24366472	CF, 4700 ohm
RP30	24366103	CF, 10k ohm
RP31	24366182	CF, 1800 ohm
RP32	24366563	CF, 56k ohm
RP33	24366103	CF, 10k ohm
RP34	24366472	CF, 4700 ohm
RP35	24366472	CF, 4700 ohm
RP36	24366103	CF, 10k ohm
RP37	24366103	CF, 10k ohm
RP38	24366750	CF, 75 ohm
RP40	24366183	CF, 18k ohm
RP41	24366103	CF, 10k ohm
RP43	24366470	CF, 47 ohm
RP44	24360430	CF, 43 ohm, 1/8W
RP45	24360470	CF, 47 ohm, 1/8W
RP46	24360151	CF, 150 ohm
RP47	24366681	CF, 680 ohm
RP48	24366471	CF, 470 ohm
RP50	24066880	VR, 500 ohm, 0.3W
RP60	24366822	CF, 8200 ohm
RP61	24366102	CF, 1k ohm
RP62	24366151	CF, 150 ohm
RP64	24360270	CF, 27 ohm, 1/8W
RP65	24360330	CF, 33 ohm, 1/8W
RP66	24360270	CF, 27 ohm, 1/8W
RP67	24366510	CF, 51 ohm
RP68	24366682	CF, 6800 ohm
RP69	24366151	CF, 150 ohm
RP71	24366151	CF, 150 ohm
RP72	24366103	CF, 10k ohm
RP73	24366473	CF, 47k ohm
RP74	24366151	CF, 150 ohm
RP75	24366511	CF, 510 ohm
RP76	24366102	CF, 1k ohm
RP77	24366102	CF, 1k ohm
RP78	24366102	CF, 1k ohm
RP80	24366221	CF, 220 ohm
RP81	24366301	CF, 300 ohm
RP83	24366102	CF, 1k ohm
RP84	24366102	CF, 1k ohm
RP85	24366102	CF, 1k ohm
RP89	24366102	CF, 1k ohm
RP90	24366152	CF, 1500 ohm
RP91	24366123	CF, 12k ohm
RP92	24366472	CF, 4700 ohm
RP95	24366472	CF, 4700 ohm
RP96	24366123	CF, 12k ohm
RP99	24366222	CF, 2200 ohm
RP101	24366102	CF, 1k ohm
RP102	24366561	CF, 560 ohm
RP103	24366202	CF, 2200 ohm
RP104	24366203	CF, 20k ohm
RP105	24366473	CF, 47k ohm
RP106	24366203	CF, 20k ohm
RP107	24366473	CF, 47k ohm
RP108	24366103	CF, 10k ohm
RP109	24366472	CF, 4700 ohm
RP110	24366103	CF, 10k ohm
RP111	24366103	CF, 10k ohm

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RP112	24366301	CF, 300 ohm
RP113	24366222	CF, 2200 ohm
RP114	24366681	CF, 680 ohm
RP115	24366681	CF, 680 ohm
RP116	24366473	CF, 47k ohm
RP117	24366203	CF, 20k ohm
RP118	24366473	CF, 47k ohm
RP119	24366561	CF, 560 ohm
RP120	24360103	CF, 10k ohm, 1/8W
RP121	24366472	CF, 4700 ohm
RP122	24366472	CF, 4700 ohm
RP123	24360103	CF, 10k ohm, 1/8W
RP124	24366103	CF, 10k ohm
RP126	24552101	OMF, 100 ohm, 1/2W
RP127	24552390	OMF, 39 ohm, 1/2W
RP128	24366822	CF, 8200 ohm
RP129	24366822	CF, 8200 ohm
RP130	24366103	CF, 10k ohm
RP131	24366103	CF, 10k ohm
RP143	24366753	CF, 75k ohm
RP144	24366332	CF, 3300 ohm
RP145	24366822	CF, 8200 ohm
RP146	24366333	CF, 33k ohm
RP150	24366750	CF, 75 ohm
RP161	24366221	CF, 220 ohm
RP162	24360561	CF, 560 ohm, 1/8W
RP163	24366221	CF, 220 ohm
RP164	24366102	CF, 1k ohm
RP166	24366271	CF, 270 ohm
RP168	24366301	CF, 300 ohm
RP171	24366102	CF, 1k ohm
RP172	24366102	CF, 1k ohm
RP173	24366182	CF, 1800 ohm
RP174	24366102	CF, 1k ohm
RP175	24366102	CF, 1k ohm
RP176	24366103	CF, 10k ohm
RP177	24366273	CF, 27k ohm
RP178	24366102	CF, 1k ohm
RP179	24366101	CF, 100 ohm
RP184	24366102	CF, 1k ohm
RP185	24366512	CF, 5100 ohm
RP186	24366102	CF, 1k ohm
RP187	24366161	CF, 160 ohm
RP188	24366105	CF, 1000k ohm
RP190	24366512	CF, 5100 ohm
RP191	24366103	CF, 10k ohm
RP192	24366102	CF, 1k ohm
RP193	24360102	CF, 1k ohm, 1/8W
RP194	24366105	CF, 1000k ohm
RP200	24366101	CF, 100 ohm
RP201	24366103	CF, 10k ohm
RP202	24366103	CF, 10 ohm
RP203	24366332	CF, 3300 ohm
RP204	24366473	CF, 47k ohm
RP205	24366182	CF, 1800 ohm
RP206	24366472	CF, 4700 ohm
RP207	24360101	CF, 100 ohm, 1/8W
RP208	24366561	CF, 560 ohm
RP209	24366561	CF, 560 ohm
RP210	24366561	CF, 560 ohm
RP211	24366472	CF, 4700 ohm
RP212	24366472	CF, 4700 ohm
RR01	24380223	CF, 22k ohm, 1/8W
RR02	24380220	CF, 22 ohm, 1/8W
RR03	24380222	CF, 2200 ohm, 1/8W

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RR07	24380562	CF, 5600 ohm, 1/8W
RX01	24553102	OMF, 1k ohm, 1W
RX02	24380302	CF, 3k ohm
RX03	24360561	CF, 560 ohm, 1/8W
RX04	24360390	CF, 39 ohm, 1/8W
RX05	24360473	CF, 47k ohm, 1/8W
RX06	24360102	CF, 1k ohm, 1/8W
RX08	24360561	CF, 560 ohm, 1/8W
RX09	24360271	CF, 270 ohm, 1/8W
RX10	24360471	CF, 470 ohm, 1/8W
RX12	24360101	CF, 100 ohm, 1/8W
RX13	24360821	CF, 820 ohm, 1/8W
RX15	24380102	CF, 1k ohm, 1/8W
RX17	24360680	CF, 68 ohm, 1/8W
RX18	24360680	CF, 68 ohm, 1/8W
RX19	24360680	CF, 68 ohm, 1/8W
RX21	24380470	CF, 47 ohm, 1/8W
RX22	24360470	CF, 47 ohm, 1/8W
RX23	24380470	CF, 47 ohm, 1/8W
RX25	24360132	CF, 1300 ohm, 1/8W
RX26	24360274	CF, 270k ohm, 1/8W
RX27	24380331	CF, 330 ohm, 1/8W
RX28	24360102	CF, 1k ohm, 1/8W
RX29	24360102	CF, 1k ohm, 1/8W
RX30	24360102	CF, 1k ohm, 1/8W
RX31	24360102	CF, 1k ohm, 1/8W
RX32	24360102	CF, 1k ohm, 1/8W
RX33	24360102	CF, 1k ohm, 1/8W
RX34	24360102	CF, 1k ohm, 1/8W
RX35	24360102	CF, 1k ohm, 1/8W
RX36	24380103	CF, 10k ohm, 1/8W
RX37	24360102	CF, 1k ohm, 1/8W
RX38	24360102	CF, 1k ohm, 1/8W
RX39	24552302	OMF, 3k ohm, 1/2W
RX40	24360222	CF, 2200 ohm, 1/8W
RX41	24360222	CF, 2200 ohm, 1/8W
RX42	24360433	CF, 43k ohm, 1/8W
RX43	24360432	CF, 4300 ohm, 1/8W
RX44	24552181	OMF, 180 ohm, 1/2W
RX45	24360100	CF, 10 ohm, 1/8W
RX46	24360100	CF, 10 ohm, 1/8W
RX47	24380102	CF, 1k ohm, 1/8W
RX48	24380471	CF, 470 ohm, 1/8W
RX49	24380202	CF, 2k ohm, 1/8W
RX51	24061669	VR, 5k ohm, 1/8W
RX61	24360102	CF, 1k ohm, 1/8W
RX62	24360330	CF, 33 ohm, 1/8W
RX63	24360331	CF, 330 ohm, 1/8W
RX70	24360242	CF, 2400 ohm, 1/8W
RX71 (U902)	24552103	OMF, 10k ohm, 1/2W
RX71 (UX01)	24380201	CF, 200 ohm, 1/8W
RX72	24360302	CF, 3k ohm, 1/8W
RX73	24380201	CF, 200 ohm, 1/8W
RX74	24380201	CF, 200 ohm, 1/8W
RX75	24360203	CF, 20k ohm, 1/8W
RX76	24380101	CF, 100 ohm, 1/8W
RX77	24380331	CF, 330 ohm, 1/8W
RX78	24380203	CF, 20k ohm, 1/8W
RX79	24360103	CF, 10k ohm, 1/8W
RX80	24360153	CF, 15k ohm, 1/8W
RX81	24380102	CF, 1k ohm, 1/8W
RX82	24380101	CF, 100 ohm, 1/8W
RX83	24380301	CF, 300 ohm, 1/8W
RX84	24360101	CF, 100 ohm, 1/8W
RX85	24360101	CF, 100 ohm, 1/8W

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RX86	24360101	CF, 100 ohm, 1/8W
RX87	24360101	CF, 100 ohm, 1/8W
RX88	24360101	CF, 100 ohm, 1/8W
RX89	24360101	CF, 100 ohm, 1/8W
RX90	24360101	CF, 100 ohm, 1/8W
RX91	24360101	CF, 100 ohm, 1/8W
RX92	24360101	CF, 100 ohm, 1/8W
RX93	24360101	CF, 100 ohm, 1/8W
RX95	24360272	CF, 2700 ohm, 1/8W
RX96	24380153	CF, 15k ohm, 1/8W
RX97	24380103	CF, 10k ohm, 1/8W
RX98	24380103	CF, 10k ohm, 1/8W
RX99	24380103	CF, 10k ohm, 1/8W
RX102	24360102	CF, 1k ohm, 1/8W
RX103	24360102	CF, 1k ohm, 1/8W
RX104	24360302	CF, 3k ohm, 1/8W
RX105	24360512	CF, 5100 ohm, 1/8W
RX106	24380103	CF, 10k ohm, 1/8W
RX107	24380103	CF, 10k ohm, 1/8W
RX108	24360682	CF, 6800 ohm, 1/8W
RX111	24380183	CF, 18k ohm, 1/8W
RX113	24360751	CF, 750 ohm, 1/8W
RX115	24360561	CF, 560 ohm, 1/8W
RX116	24380103	CF, 10k ohm, 1/8W
RX117	24360681	CF, 680 ohm, 1/8W
RX118	24360100	CF, 10 ohm, 1/8W
RX119	24360621	CF, 620 ohm, 1/8W
RX120	24360100	CF, 10 ohm, 1/8W
RX121	24360100	CF, 10 ohm, 1/8W
RX122	24360100	CF, 10 ohm, 1/8W
RX123	24360100	CF, 10 ohm, 1/8W
RX124	24360102	CF, 1k ohm, 1/8W
RX125	24360102	CF, 1k ohm, 1/8W
RX126	24360183	CF, 18k ohm, 1/8W
RX130	24360102	CF, 1k ohm, 1/8W
RX131	24360102	CF, 1k ohm, 1/8W
RX132	24360102	CF, 1k ohm, 1/8W
RX133	24360332	CF, 3300 ohm, 1/8W
RX134	24360332	CF, 3300 ohm, 1/8W
RX135	24360332	CF, 3300 ohm, 1/8W
RX200	24360432	CF, 4300 ohm, 1/8W
RX300	24360122	CF, 1200 ohm, 1/8W
RY01	24366183	CF, 18k ohm
RY03	24366102	CF, 1k ohm
RY04	24366102	CF, 1k ohm
RY05	24366102	CF, 1k ohm
RY06	24366272	CF, 2700 ohm
RY07	24366102	CF, 1k ohm
RY09	24366103	CF, 10k ohm
RY10	24366432	CF, 4300 ohm
RY11	24366122	CF, 1200 ohm
RY12	24366392	CF, 3900 ohm
RY13	24366102	CF, 1k ohm
RY14	24366511	CF, 510 ohm
RY15	24366822	CF, 8200 ohm
RY17	24360102	CF, 1k ohm, 1/8W
RY18	24366334	CF, 330k ohm
RY19	24366103	CF, 10k ohm
RY20	24366472	CF, 4700 ohm
RY21	24360823	CF, 82k ohm, 1/8W
RY22	24360563	CF, 56k ohm, 1/8W
RY23	24366221	CF, 220 ohm
RY24	24366272	CF, 2700 ohm
RY25	24366272	CF, 2700 ohm
RY26	24360101	CF, 100 ohm, 1/8W

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RY27	24360101	CF, 100 ohm, 1/8W
RY28	24360203	CF, 20k ohm, 1/8W
RY29 (U902)	24366102	CF, 1k ohm
RY29 (UX01)	24380223	CF, 22k ohm, 1/8W
RY30 (U902)	24366223	CF, 22k ohm
RY30 (UX01)	24380222	CF, 2200 ohm, 1/8W
RY31 (U902)	24366103	CF, 10k ohm
RY31 (UX01)	24380822	CF, 8200 ohm, 1/8W
RY32 (U902)	24366222	CF, 2200 ohm
RY32 (UX01)	24360242	CF, 2400 ohm
RY33 (U902)	24366112	CF, 1100 ohm
RY33 (UX01)	24380302	CF, 3k ohm, 1/8W
RY34 (U902)	24366823	CF, 82k ohm
RY34 (UX01)	24380223	CF, 22k ohm, 1/8W
RY35	24366223	CF, 22k ohm
RY36	24366102	CF, 1k ohm
RY37	24366302	CF, 3k ohm
RY38 (U902)	24366102	CF, 1k ohm
RY38 (UX01)	24982919	MF, 9.1 ohm, 1/2W
RY39	24366122	CF, 1200 ohm
RY39 (UX01)	24380471	CF, 470 ohm
RY40	24380564	CF, 560k ohm
RY41	24941335	CC, 3.3M ohm, 1/4W
RY42	24380123	CF, 12k ohm
RY43	24380302	CF, 3k ohm, 1/8W
RY44	24380153	CF, 15k ohm
RY45	24360432	CF, 4300 ohm, 1/8W
RY46	24941335	CC, 3.3M ohm, 1/4W
RY47	24380162	CF, 1600 ohm
RY48	24380822	CF, 8200 ohm, 1/8W
RY51	24069793	VR, 10k ohm, 0.08W
RY52	24069793	VR, 10k ohm, 0.08W
RY53	24063742	VR, 10k ohm, 0.08W
RY54	24069792	VR, 10k ohm, 0.08W, CC
RY55	24061672	VR, 500 ohm, 1/8W
RY56	24061668	VR, 10k ohm, 1/8W
RY61	24360222	CF, 2200 ohm, 1/8W
RY62	24360684	CF, 680k ohm
RY63	24360471	CF, 470 ohm, 1/8W
RY68	24360471	CF, 470 ohm, 1/8W
RY80	24366104	CF, 100k ohm
RY103	24380911	CF, 910 ohm, 1/8W
RY104	24380911	CF, 910 ohm, 1/8W
RY105	24360102	CF, 1k ohm, 1/8W
RY106	24360102	CF, 1k ohm, 1/8W
RY107	24380911	CF, 910 ohm, 1/8W
RY108	24380911	CF, 910 ohm, 1/8W
RY109	24360102	CF, 1k ohm, 1/8W
RY110	24360102	CF, 1k ohm, 1/8W
RY111	24380332	CF, 3300 ohm, 1/8W
RY112	24360332	CF, 3300 ohm, 1/8W
RY113	24360332	CF, 3300 ohm
RY114	24360332	CF, 3300 ohm
RY115	24360102	CF, 1k ohm, 1/8W
RY116	24360102	CF, 1k ohm, 1/8W
RY117	24360102	CF, 1k ohm, 1/8W
RY119	24380751	CF, 750 ohm, 1/8W
RY120	24380751	CF, 750 ohm, 1/8W
RY124	24360104	CF, 100k ohm, 1/8W
RY125	24360223	CF, 22k ohm, 1/8W
RY126	24360102	CF, 1k ohm, 1/8W
RY127	24360513	CF, 51k ohm, 1/8W
RY128	24360332	CF, 3300 ohm, 1/8W
RY129	24360332	CF, 3300 ohm, 1/8W
RY130	24380333	CF, 33k ohm, 1/8W

LOCATION NUMBER	PART NUMBER	DESCRIPTION
RY131	24380333	CF, 33k ohm, 1/8W
RY132	24982919	MF, 9.1 ohm, 1/2W
RY138	24380102	CF, 1k ohm, 1/8W
RY143	24360332	CF, 3300 ohm, 1/8W
RY144	24360433	CF, 43k ohm, 1/8W
RY145	24360153	CF, 15k ohm, 1/8W
RY146	24360102	CF, 1k ohm, 1/8W
RY148	24360332	CF, 3300 ohm, 1/8W
RY149	24380223	CF, 22k ohm, 1/8W
RY160	24380102	CF, 1k ohm, 1/8W
RY161	24380332	CF, 3300 ohm, 1/8W
RY170	24380102	CF, 1k ohm, 1/8W
RY171	24380302	CF, 3k ohm, 1/8W
RY172	24380511	CF, 510 ohm, 1/8W
RY173	24380511	CF, 510 ohm, 1/8W
RY174	24380330	CF, 33 ohm, 1/8W
RY175	24380101	CF, 100 ohm, 1/8W
RY176	24552561	OMF, 560 ohm, 1/2W
RY177	24360100	CF, 10 ohm, 1/8W
RY178	24380474	CF, 470k ohm, 1/8W
RY179	24380333	CF, 33k ohm, 1/8W
RY180	24380562	CF, 5600 ohm, 1/8W
RY181	24380100	CF, 100 ohm, 1/8W
RY182	24360472	CF, 4700 ohm, 1/8W
RY183	24360202	CF, 2k ohm, 1/8W
RY185	24360101	CF, 100 ohm, 1/8W
RY186	24360101	CF, 100 ohm, 1/8W
RY187	24360101	CF, 100 ohm, 1/8W
RY188	24360101	CF, 100 ohm, 1/8W
RY189	24360101	CF, 100 ohm, 1/8W
RY190	24360101	CF, 100 ohm, 1/8W
RY191	24360101	CF, 100 ohm, 1/8W
COILS & TRANSFORMERS		
L061	23221026	Coil, RF Choke, AZ9004Y
L101	23201004	Coil, Choke, TRF9202B
L102	23262820	Coil, PIF, TRF1070
L103	23262827	Coil, PIF, TRF1066
L104	23262819	Coil, PIF, TRF1071
L106	23261052	Coil, RF Choke, AZ9246F
L141	23238920	Coil, Peaking, TRF4150AC
L142	23238934	Coil, Peaking, TRF4109AC
L171	23262827	Coil, PIF, TRF1066
L310	23261974	Coil (Ferrite Bead), HC5-035
L410	23261974	Coil (Ferrite Bead), HC5-035
L441	23222672	Coil, Linearity, TLN2057
L444	23221026	Coil, RF Choke, AZ9004Y
L450	23284109	Coil, Peaking, TRF4109
△L462	23227549	Deflection Yoke, TDY6216A
L462A	23199318	Compensator, DY, TC-C
L462B	23199314	Compensator, DY, TC-E
L603	23252930	Coil, SIF, TRF6010
L604	23262827	Coil, PIF, TRF1066
L605	23237933	Coil, Peaking, TRF4240AC
L606	23261052	Coil, RF Choke, AZ9246F
L807	23261975	Coil, Choke, TRF9229
L861	23261974	Coil (Ferrite Bead), HC5-035
L862	23221996	Coil, Choke, TLN1015W
L883	23261975	Coil, Choke, TRF9229
L884	23261975	Coil, Choke, TRF9229
L885	23222694	Coil, Width, TLN2026
△L901	23200861	Coil, Degaussing, TSB2153

LOCATION NUMBER	PART NUMBER	DESCRIPTION
L902	23238908	Coil, Peaking, TRF4151AC
L903	23238908	Coil, Peaking, TRF4151AC
L904	23238908	Coil, Peaking, TRF4151AC
L905	23261053	Coil, Choke, AZ9246G
L906	23261053	Coil, Choke, AZ9246G
L907	23261053	Coil, Choke, AZ9246G
LA01	23237999	Coil, Peaking, TRF4109AC
LA02	23237947	Coil, Peaking, TRF4629
LA03	23283629	Coil, Peaking, TRF4629
LA04	23237947	Coil, Peaking, TRF4629
LG04	23232987	Coil, Tuning, TRF3025
LP10	23238934	Coil, Peaking, TRF4109AC
LP12	23237979	Coil, Peaking, TRF4470AC
LP13	23237979	Coil, Peaking, TRF4470AC
LP18	23261983	Coil, TRF9223
LR01	23232963	Coil, TRF3055
LR02	23232963	Coil, TRF3055
LX01	23237987	Coil, Peaking, TRF4100AC
LX02	23237987	Coil, Peaking, TRF4100AC
LX03	23261984	Coil (Ferrite Bead), HC3-035
LX05	23261984	Coil (Ferrite Bead), HC3-035
LX62	23237999	Coil, Peaking, TRF4109
LX63	23237999	Coil, Peaking, TRF4109
LX64	23237999	Coil, Peaking, TRF4109
LY01	23237923	Coil, Peaking, TRF4620AC
LY02	23237931	Coil, Peaking, TRF4300AC
LY03	23237917	Coil, Peaking, TRF4111AC
LY04	23103940	Coil (Ferrite Bead), TEM2001
LY05	23261984	Coil (Ferrite Bead), HC3-035
LY06	23261984	Coil (Ferrite Bead), HC3-035
LY07	23261984	Coil (Ferrite Bead), HC3-035
LY08	23261984	Coil (Ferrite Bead), HC3-035
LY10	23237987	Coil, Peaking, TRF4100AC
LY11	23103940	Coil (Ferrite Bead), TEM2001
LY21	23238768	Coil, Peaking, TRF4681AC
LY22	23238768	Coil, Peaking, TRF4681AC
T401	23224988	Transformer, Horiz Drive, TLN1032
△T461	23236006	Transformer, Flyback, TFB4042AD
△T801	23211980	Line Filter, TRF3104H
△T802	23213847	Transformer, RMT POWER, TPW1257
△T804	23213774	Transformer, Power, TPW1307
△T861	23211980	Line Filter, TRF3104H
△T862	23213851	Transformer, Converter, TPW3039
SEMICONDUCTORS		
IC101	B0356602	IC, TA7660P
IC301	23119386	IC, AN5530K
IC601	B0356784	IC, TA7678AP
IC603	23119710	IC, AN5836
IC610	23119763	IC, AN7158N
IC822	23119568	IC, SI-3052V
ICA01	23119366	IC, TMP47C432N8931
ICA02	B0428420	IC, TMM842P
ICA03	B0272490	IC, TD6350P

LOCATION NUMBER	PART NUMBER	DESCRIPTION
ICA05	B0475552	IC, TC4555BP
ICG06	B0325355	IC, TA7343AP
ICG08	B0350500	IC, TA75558P
ICG08	or B0350602	IC, TA75559P FA-1
ICG09	B0470662	IC, TC4066BP
ICG15	B0312100	IC, TA7133P
ICG33	B0470522	IC, TC4052BP
ICG35	23119489	IC, AN6291
ICG37	B0350500	IC, TA75558P
ICG37	or B0350602	IC, TA75559P FA-1
ICG38	B0350500	IC, TA75558P
ICG38	or B0350602	IC, TA75559P FA-1
ICG39	B0350500	IC, TA75558P
ICG39	or B0350602	IC, TA75559P FA-1
ICP01	23119785	IC, HD7406P
ICP02	23119555	IC, TA7717AP
ICP03	23119742	IC, HD74LS26P
ICP04	B0470662	IC, TC4066BP
ICP05	B0470532	IC, TC4053BP
ICP29	B0470662	IC, TC4066BP
ICP40	B0471040	IC, TC40H004P
ICP41	B0589100	IC, TL8610P
ICP46	B0470662	IC, TC4066BP
ICR01	23119566	IC, μ PC1474HA
ICX01	23119464	IC, MAA2100B
ICX02	23119396	TMP80C50A9905-6
ICX03	23119460	IC, MDA2061
ICX04	23119463	IC, MAA2210
ICX05	23119461	IC, MEA2600
ICX06	23119462	IC, MAA2500
ICY01	B0357750	IC, TA7728P
ICY02	B0354833	IC, TA7608CP FA-6
ICY04	B0486000	IC, TC74HC00P
ICY21	72112036	IC, SN7406N
ICY22	23119628	IC, SN74LS86N
ICY22	or B0486086	IC, TC74HC86P
ICY25	B0470662	IC, TC4066BP
ICY26	B0470662	IC, TC4066BP
ICY28	B0483330	IC, TC5565PL-12
ICY28	or B0483325	IC, TC5565P-12
ICY28	or B0483380	IC, TC5565P15
ICY28	or B0483342	IC, TC5565PL15
ICY29	B0483330	IC, TC5565PL-12
ICY29	or B0483325	IC, TC5565P-12
ICY29	or B0483380	IC, TC5565P15
ICY29	or B0483342	IC, TC5565PL15
ICY30	B0483330	IC, TC5565PL-12
ICY30	or B0483325	IC, TC5565P-12
ICY30	or B0483380	IC, TC5565P15
ICY30	or B0483342	IC, TC5565PL15
ICY31	B0483330	IC, TC5565PL-12
ICY31	or B0483325	IC, TC5565P-12
ICY31	or B0483380	IC, TC5565P15
ICY31	or B0483342	IC, TC5565PL15
ICY32	23119377	IC, SN74ALS257N
ICY32	or 23119625	IC, SN74LS157N
ICY33	23119377	IC, SN74ALS257N
ICY33	or 23119625	IC, SN74LS157N
ICY34	23119377	IC, SN74ALS257N
ICY34	or 23119625	IC, SN74LS157N
ICY71	23119452	IC, MSM60748GS-K
ICY72	23119453	IC, MSM61035GS-K
ICY80	23119457	IC, MB40576
ICY81	23119622	IC, SN74LS174N
ICY81	or 23119378	IC, SN74ALS174N

LOCATION NUMBER	PART NUMBER	DESCRIPTION
ICY82	23119622	IC, SN74LS174N
ICY82	or 23119378	IC, SN74ALS174N
ICY83	23119630	IC, SN74LS32N
ICY83	or 23119379	IC, SN74ALS32N
ICY84	23119394	IC, SN74S74N
ICY84	or 23119380	IC, SN74AS74N
ICY85	23119679	IC, SN74LS74AN
ICY85	or B0486074	IC, TC74HC74P
ICY86	23119679	IC, SN74LS74AN
ICY86	or B0486074	IC, TC74HC74P
ICY87	B0486273	IC, TC74HC273P
ICY88	23119627	IC, SN74LS138N
ICY88	or B0486138	IC, TC74HC138P
ICY89	23119687	IC, SN74LS00N
ICY89	or B0486000	IC, TC74HC00P
ICY90	23119393	IC, SN74LS175N
ICY91	23119630	IC, SN74LS32N
ICY91	or 23119379	IC, SN74ALS32N
ICY92	23119682	IC, SN74LS20N
ICY92	or B0486020	IC, TC74HC20P
ICY93	23119631	IC, SN74LS11N
ICY94	23119616	IC, SN74S10N
ICY94	or 23119381	IC, SN74AS10N
ICY95	or B0486004	IC, TC74HCU04P
ICY95	or B0485610	IC, TC74HC04P
ICY96	B0486004	IC, TC74HC1104P
ICY96	or B0485610	IC, TC74HC04P
ICY97	B0486000	IC, TC74HC00P
ICY97	or 23119687	IC, SN74LS00N
ICY98	23119623	IC, SN74LS164N
Q141	A6317547	Transistor, 2SC1815-Y
Q142	A6317547	Transistor, 2SC1815-Y
Q143	A6317547	Transistor, 2SC1815-Y
Q370	A6534045	Transistor, 2SA1015-Y
Q371	A6534045	Transistor, 2SA1015-Y
Q372	A6534045	Transistor, 2SA1015-Y
Q373	A6317547	Transistor, 2SC1815-Y
Q402	A6330004	Transistor, 2SC2482 FA-1
△Q404	A6868702	Transistor, 2SD1427
Q420	A6848520	Transistor, 2SD880-Y
Q420	or A6848510	Transistor, 2SD880-O
Q471	A6534021	Transistor, 2SA1015-O
Q472	A6317547	Transistor, 2SC1815-Y
Q473	A6534021	Transistor, 2SA1015-O
Q474	A6317547	Transistor, 2SC1815-Y
Q605	A6317547	Transistor, 2SC1815-Y
△Q801	A6846806	Transistor, 2SD820 FA-1
Q821	A6848908	Transistor, 2SD1052A
Q861	A6534045	Transistor, 2SA1015-Y
Q862	A6319302	Transistor, 2SC1959-Y
Q863	A6533730	Transistor, 2SA1012-Y
Q864	A6848908	Transistor, 2SD1052A
Q902	A6319400	Transistor, 2SC2068
Q903	A6319400	Transistor, 2SC2068
Q904	A6319400	Transistor, 2SC2068
Q905	A6547300	Transistor, 2SA1321
Q906	A6547300	Transistor, 2SA1321
Q907	A6547300	Transistor, 2SA1321
Q908	A6360250	Transistor, 2SC3334
Q909	A6360250	Transistor, 2SC3334
Q910	A6360250	Transistor, 2SC3334
QA30	A6317526	Transistor, 2SC1815-O
QA31	A6317526	Transistor, 2SC1815-O
QA32	A6317547	Transistor, 2SC1815-Y
QA60	A6317547	Transistor, 2SC1815-Y

LOCATION NUMBER	PART NUMBER	DESCRIPTION
QA61	A6534045	Transistor, 2SA1015-Y
QA62	A6534045	Transistor, 2SA1015-Y
QA63	A6317581	Transistor, 2SC1815-BL
QA64	A6317581	Transistor, 2SC1815-BL
QA80	A6534045	Transistor, 2SA1015-Y
QA81	A6317547	Transistor, 2SC1815-Y
QA82	A6317547	Transistor, 2SC1815-Y
QA85	A6317547	Transistor, 2SC1815-Y
QA86	A6317547	Transistor, 2SC1815-Y
QA87	A6317547	Transistor, 2SC1815-Y
QB19	A6534045	Transistor, 2SA1015-Y
QB35	A6734592	Transistor, 2SC752GTM-Y
QB36	A6317547	Transistor, 2SC1815-Y
QB37	A6317547	Transistor, 2SC1815-Y
QE02	A6317547	Transistor, 2SC1815-Y
QE03	A6317547	Transistor, 2SC1815-Y
QE07	A6848908	Transistor, 2SD1052A
QE08	A6314440	Transistor, 2SC1627-Y
QE09	A6317547	Transistor, 2SC1815-Y
QE35	A6333320	Transistor, 2SC2655-Y
QE50	A6330000	Transistor, 2SC2482
QG01	A6317547	Transistor, 2SC1815-Y
QG02	A6317547	Transistor, 2SC1815-Y
QG03	A6317547	Transistor, 2SC1815-Y
QG04	A6317547	Transistor, 2SC1815-Y
QG05	A6534045	Transistor, 2SA1015-Y
QG07	A6534063	Transistor, 2SA1015-GR
QG10	A6317547	Transistor, 2SC1815-Y
QG11	A6317547	Transistor, 2SC1815-Y
QG12	A6534045	Transistor, 2SA1015-Y
QG13	A6317547	Transistor, 2SC1815-Y
QG14	A6317547	Transistor, 2SC1815-Y
QG16	A6534045	Transistor, 2SA1015-Y
QG17	A6317547	Transistor, 2SC1815-Y
QG18	A6534045	Transistor, 2SA1015-Y
QG19	A6317547	Transistor, 2SC1815-Y
QG20	A6534045	Transistor, 2SA1015-Y
QG21	A6534045	Transistor, 2SA1015-Y
QG22	A6317547	Transistor, 2SC1815-Y
QG23	A6317547	Transistor, 2SC1815-Y
QG36	A6317547	Transistor, 2SC1815-Y
QG50	A6534045	Transistor, 2SA1015-Y
QG50	or 23114562	Transistor, 2SA733A
QG51	A6534045	Transistor, 2SA1015-Y
QG51	23114562	Transistor, 2SA733A
QG52	A6734592	Transistor, 2SC752GTM-Y
QG53	A6734592	Transistor, 2SC752GTM-Y
QG54	A6734592	Transistor, 2SC752GTM-Y
QG55	A6534045	Transistor, 2SA1015-Y
QG56	A6534045	Transistor, 2SA1015-Y
QG57	A6534045	Transistor, 2SA1015-Y
QP06	23114544	Transistor, 2SA1206
QP07	23114544	Transistor, 2SA1206
QP08	A6734592	Transistor, 2SC752GTM-Y
QP11	A6317547	Transistor, 2SC1815-Y
QP12	A6317547	Transistor, 2SC1815-Y
QP15	A6317547	Transistor, 2SC1815-Y
QP16	A6708871	Transistor, 2SC388ATM
QP17	A6534045	Transistor, 2SA1015-Y
QP18	A6708871	Transistor, 2SC388ATM
QP19	A6317547	Transistor, 2SC1815-Y
QP20	A6708871	Transistor, 2SC388ATM
QP21	A6317547	Transistor, 2SC1815-Y
QP22	A6317547	Transistor, 2SC1815-Y
QP24	A6317547	Transistor, 2SC1815-Y

LOCATION NUMBER	PART NUMBER	DESCRIPTION
QP25	A6317547	Transistor, 2SC1815-Y
QP26	A6317547	Transistor, 2SC1815-Y
QP27	A6317547	Transistor, 2SC1815-Y
QP28	A6317547	Transistor, 2SC1815-Y
QP38	A6534045	Transistor, 2SA1015-Y
QP45	23114544	Transistor, 2SA1206
QP47	A6317547	Transistor, 2SC1815-Y
QP48	A6317547	Transistor, 2SC1815-Y
QP49	A6317567	Transistor, 2SC1815-GR
QP50	A6317567	Transistor, 2SC1815-GR
QP51	A6317567	Transistor, 2SC1815-GR
QX11	A6509141	Transistor, 2SA562TM-Y
QX13	A6317547	Transistor, 2SC1815-Y
QX14	A6317547	Transistor, 2SC1815-Y
QX15	A6317547	Transistor, 2SC1815-Y
QX17	A6534045	Transistor, 2SA1015-Y
QX19	A6734592	Transistor, 2SC752GTM-Y
QX21	A6534045	Transistor, 2SA1015-Y
QX23	A6534045	Transistor, 2SA1015-Y
QX26	A6534045	Transistor, 2SA1015-Y
QX29	A6317547	Transistor, 2SC1815-Y
QX30	A6734592	Transistor, 2SC752GTM-Y
QY11	A6534045	Transistor, 2SA1015-Y
QY12	A6317547	Transistor, 2SC1815-Y
QY13	A6317547	Transistor, 2SC1815-Y
QY14	A6317547	Transistor, 2SC1815-Y
QY15	A6317547	Transistor, 2SC1815-Y
QY16	A6317547	Transistor, 2SC1815-Y
QY17	A6317547	Transistor, 2SC1815-Y
QY18	A6317547	Transistor, 2SC1815-Y
QY41	A6534045	Transistor, 2SA1015-Y
QY42	A6534045	Transistor, 2SA1015-Y
QY43	A6534045	Transistor, 2SA1015-Y
QY44	A6534045	Transistor, 2SA1015-Y
QY45	A6319302	Transistor, 2SC1959-Y
QY46	A6317581	Transistor, 2SC1815-BL
QY47	A6317547	Transistor, 2SC1815-Y
QY48	A6317547	Transistor, 2SC1815-Y
QY49	A6317581	Transistor, 2SC1815-BL
QY50	A6317547	Transistor, 2SC1815-Y
QY51	A6317547	Transistor, 2SC1815-Y
QY52	A6534045	Transistor, 2SA1015-Y
QY54	A6317547	Transistor, 2SC1815-Y
QY55	A6317581	Transistor, 2SC1815-BL
QY56	A6317547	Transistor, 2SC1815-Y
QY60	A6534045	Transistor, 2SA1015-Y
QY61	A6534045	Transistor, 2SA1015-Y
D301	23115532	Diode, ERB12-01RK
D302	A7568300	Diode, 1S1835
D406	A7978850	Diode, S5295G
D408	A7568300	Diode, 1S1835
D420	A7110017	Diode, 05Z5.6Y
D421	A7110115	Diode, Zener, 05Z6.8Y
D471	A7568460	Diode, TVR-1B
AD472	23115774	Diode, Zener, RD6.2E FA-1
D475	A7246711	Diode, 1S1555
D801	A7568754	Diode, 1S1887A FA-1
D802	A7568754	Diode, 1S1887A FA-1
D803	A7568754	Diode, 1S1887A FA-1
D804	A7568754	Diode, 1S1887A FA-1
D821	23115532	Diode, ERB12-01RK
D822	A7580310	Diode, 3BZ61
D823	A7580310	Diode, 3BZ61
D824	23115532	Diode, ERB12-01RK
D825	A7568752	Diode, 1S1887A
D826	A7110461	Diode, Zener, 05Z13X

LOCATION NUMBER	PART NUMBER	DESCRIPTION
D861	A7978850	Diode, S5295G
D862	A7801021	Diode(SCR), SF0R1B42IG1
D863	A7246602	Diode, 1S1553
D864	A7978850	Diode, S5295G
D865	A7978850	Diode, S5295G
D866	A7978850	Diode, S5295G
D867	A7978850	Diode, S5295G
D868	A7978850	Diode, S5295G
D869	A7246711	Diode, 1S1555
D870	A7110017	Diode, 05Z5.6Y
D871	A7978850	Diode, S5295G
D872	A7150258	Diode, 1SS176
AD873	23115774	Diode, Zener, RD6.2E FA-1
D880	23115585	Diode, GU3SZ
D881	A7110412	Diode, Zener, 05Z12Z
D883	A7580660	Diode, 3JH61
D900	A7110016	Diode, Zener, 05Z5.6X
D900	or A7110017	Diode, Zener, 05Z5.6Y
D900	or A7110018	Diode, Zener, 05Z5.6Z
DA01	A7150258	Diode, 1SS176
DA01	or 23118859	Diode, 1SS133
DA02	A7150258	Diode, 1SS176
DA02	or 23118859	Diode, 1SS133
DA03	A7150258	Diode, 1SS176
DA03	or 23118859	Diode, 1SS133
DA04	A7150258	Diode, 1SS176
DA04	or 23118859	Diode, 1SS133
DA05	A7150258	Diode, 1SS176
DA05	or 23118859	Diode, 1SS133
DA06	A7150258	Diode, 1SS176
DA06	or 23118859	Diode, 1SS133
DA15	A7150258	Diode, 1SS176
DA15	or 23118859	Diode, 1SS133
DA16	A7150258	Diode, 1SS176
DA18	A7150258	Diode, 1SS176
DA19	A7150258	Diode, 1SS176
DA60	A7150258	Diode, 1SS176
DA61	A7150258	Diode, 1SS176
DA62	A7150258	Diode, 1SS176
DA63	A7150258	Diode, 1SS176
DA64	A7150258	Diode, 1SS176
DA65	A7246711	Diode, 1S1555
DA66	A7150258	Diode, 1SS176
DA67	A7150258	Diode, 1SS176
DA68	A7150258	Diode, 1SS176
DA69	A7150258	Diode, 1SS176
DA70	A7246711	Diode, 1S1555
DA71	A7246711	Diode, 1S1555
DA80	A7246711	Diode, 1S1555
DA81	A7246711	Diode, 1S1555
DA82	A7246711	Diode, 1S1555
DA83	A7150258	Diode, 1SS176
DA98	A7246711	Diode, 1S1555
DA99	A7246711	Diode, 1S1555
DB34	A7150258	Diode, 1SS176
DE01	A7568521	Diode, 1S1885
DE02	A7568521	Diode, 1S1885
DE03	A7568521	Diode, 1S1885
DE04	A7568521	Diode, 1S1885
DE05	A7150258	Diode, 1SS176
DE09	A8603170	Diode (LED), TLR211
DE11	A7150258	Diode, 1SS176
DE12	A7110040	Diode, Zener, 05Z5.1X
DE13	A7150258	Diode, 1SS176
DE30	23115922	Diode, Zener, μ PC574J

LOCATION NUMBER	PART NUMBER	DESCRIPTION
DE31	A7150258	Diode, 1SS176
DE35	A7109433	Diode, Zener, 05Z4.3Y
DG01	A7150258	Diode, 1SS176
DG02	A7150258	Diode, 1SS176
DG03	A7150258	Diode, 1SS176
DG06	A7110076	Diode, Zener, 05Z6.2Y
DG06	A7110077	Diode, Zener, 05Z6.2Z
DG07	A7150258	Diode, 1SS176
DG11	A7150258	Diode, 1SS176
DG12	A7150258	Diode, 1SS176
DG50	23118859	Diode, 1SS133
DG51	A7246711	Diode, 1S1555
DG52	A7150258	Diode, 1SS176
DG53	A7150258	Diode, 1SS176
DG54	A7150258	Diode, 1SS176
DG55	A7150258	Diode, 1SS176
DG56	A7150258	Diode, 1SS176
DP02	A7110412	Diode, Zener, 05Z12Z
DP03	A7150258	Diode, 1SS176
DP04	A7150258	Diode, 1SS176
DP05	A7150258	Diode, 1SS176
DP06	A7150258	Diode, 1SS176
DP07	A7150258	Diode, 1SS176
DP08	A7150258	Diode, 1SS176
DP09	A7150258	Diode, 1SS176
DP10	A7150258	Diode, 1SS176
DP12	A7150258	Diode, 1SS176
DP14	A7110410	Diode, Zener, 05Z12X
DP14	or A7110411	Diode, Zener, 05Z12Y
DP14	or A7110412	Diode, Zener, 05Z12Z
DP21	A7110208	Diode, Zener, 05Z8.2Y
DR01	23115800	Diode, PH302, Photo
DR01	or A8652035	Diode, TPS703, Photo
DX01	A7246711	Diode, 1S1555
DX02	A7246711	Diode, 1S1555
DX03	A7246711	Diode, 1S1555
DX04	A7110635	Diode, Zener, 05Z20Z
DX05	A7246711	Diode, 1S1555
DX09	A7110114	Diode, Zener, 05Z6.8X
DX09	or A7110115	Diode, Zener, 05Z6.8Y
DX11	A7246711	Diode, 1S1555
DX13	A7568754	Diode, 1S1887A FA-1
DX14	A7246711	Diode, 1S1555
DX20	A7246711	Diode, 1S1555
DX21	A7246711	Diode, 1S1555
DX22	A7246711	Diode, 1S1555
DX24	A7246711	Diode, 1S1555
DX25	A7246711	Diode, 1S1555
DX26	A7246711	Diode, 1S1555
DX27	A7246711	Diode, 1S1555
DX28	A7246711	Diode, 1S1555
DX29	A7246711	Diode, 1S1555
DX30	A7246711	Diode, 1S1555
DX31	A7246711	Diode, 1S1555
DX32	A7246711	Diode, 1S1555
DX33	A7246711	Diode, 1S1555
DX34	A7246711	Diode, 1S1555
DX35	A7246711	Diode, 1S1555
DX37	A7246711	Diode, 1S1555
DX38	A7110040	Diode, Zener, 05Z5.1X
DX38	or A7110041	Diode, Zener, 05Z5.1Y
DX39	A7110040	Diode, Zener, 05Z5.1X
DX39	or A7110041	Diode, Zener, 05Z5.1Y
DX40	A7110040	Diode, Zener, 05Z5.1X
DX40	or A7110041	Diode, Zener, 05Z5.1Y

LOCATION NUMBER	PART NUMBER	DESCRIPTION
DX41	A7110410	Diode, Zener, 05Z12X
DX41	or A7110411	Diode, Zener, 05Z12Y
DX42	A7110410	Diode, Zener, 05Z12X
DX42	or A7110411	Diode, Zener, 05Z12Y
DX43	A7110410	Diode, Zener, 05Z12X
DX43	or A7110411	Diode, Zener, 05Z12Y
DX44	A7110016	Diode, Zener, 05Z5.6X
DX44	or A7110017	Diode, Zener, 05Z5.6Y
DX44	or A7110018	Diode, Zener, 05Z5.6Z
DX45	A7110016	Diode, Zener, 05Z5.6X
DX45	or A7110017	Diode, Zener, 05Z5.6Y
DX45	or A7110018	Diode, Zener, 05Z5.6X
DX46	A7110016	Diode, Zener, 05Z5.6X
DX46	or A7110017	Diode, Zener, 05Z5.6Y
DX46	or A7110018	Diode, Zener, 05Z5.6Z
DX50	A7246711	Diode, 1S1555
DX51	A7246711	Diode, 1S1555
DX52	A7246711	Diode, 1S1555
DX72	A7246711	Diode, 1S1555
DY01	A7150258	Diode, 1SS176
DY02	A7246711	Diode, 1S1555
DY03	A7246711	Diode, 1S1555
DY05	A7246711	Diode, 1S1555
DY06	A7246711	Diode, 1S1555
DY10	A7246711	Diode, 1S1555
DY11	A7246711	Diode, 1S1555
DY12	A7246711	Diode, 1S1555
MISCELLANEOUS		
△F801	23144942	Fuse, 3A
F801A	23165081	Fuse Holder
△F803	23144893	Fuse, 3.15A
F803A	23165102	Fuse Holder
△F821	23144897	Fuse, 2A, UL
F821A	23165102	Fuse Holder
△F882	23144907	Fuse, 1A
F882A	23165102	Fuse Holder
K912	23120794	Remote Control Hand Unit, CT9114
M007Z	23391069	Flexible Block
P001	23142596	Terminal Board
P002	23363474	Connector, F-type
P003	23161808	Terminal, Speaker, 4P
P661	23166180	Jack, Headphone
P662	23167640	Jack, Phono
P663	23167640	Jack, Phono
P664	23167640	Jack, Phono
P665	23167640	Jack, Phono
P666	23167640	Jack, Phono
P667	23167640	Jack, Phono
△P801	23176795	Power Cord, (CZ2094)
△P801	23176825	Power Cord, (CX2094C)
△P850	23164439	AC Socket, 3P, (CZ2094)
PP01	23116335	Socket, 21P
PP02	23363771	Connector, 8P
PP10	23363872	Pin Jack, Yellow
PP11	23363871	Pin Jack, Red
PP12	23363873	Pin Jack, White
PP13	23363872	Pin Jack, Yellow
PP14	23363871	Pin Jack, Red
PP15	23363873	Pin Jack, White
PP16	23363872	Pin Jack, Yellow
PP17	23363871	Pin Jack, Red
PP18	23363873	Pin Jack, White
PP19	23363871	Pin Jack, Yellow

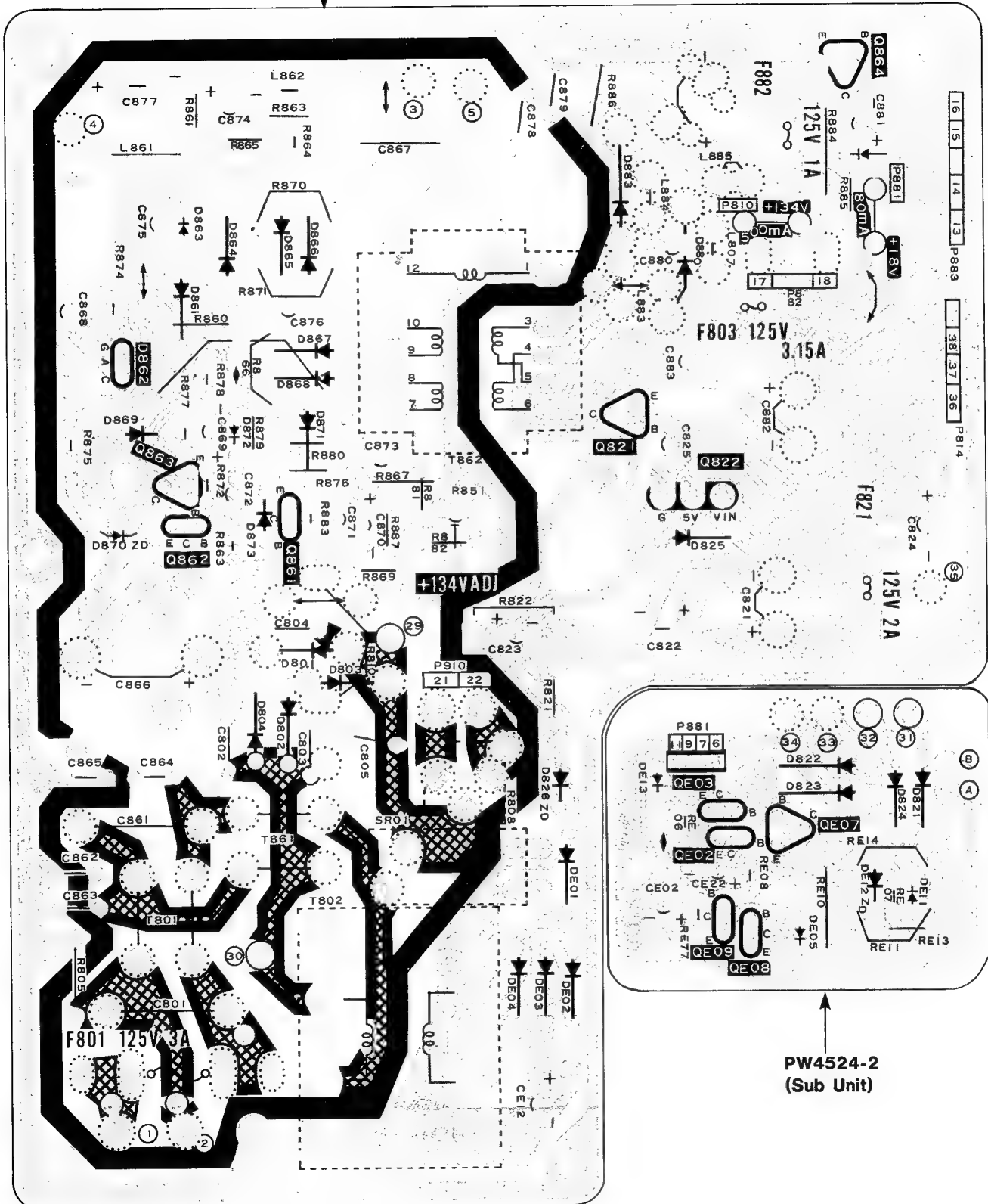
LOCATION NUMBER	PART NUMBER	DESCRIPTION
PP20	23363873	Pin Jack, Red
S001	23145747	Switch, Slide, 2C2P
SA01	23145539	Switch, Slide, 2C2P
SA71	23145563	Switch, Push, 1C1P
SA72	23145563	Switch, Push, 1C1P
SA73	23145563	Switch, Push, 1C1P
SA74	23145563	Switch, Push, 1C1P
SA76	23145563	Switch, Push, 1C1P
SA77	23145563	Switch, Push, 1C1P
SA79	23145563	Switch, Push, 1C1P
SA80	23145563	Switch, Push, 1C1P
SA81	23145580	Switch, Push
SA82	23145580	Switch, Push
SA83	23145580	Switch, Push
SA84	23145580	Switch, Push
SA85	23145580	Switch, Push
SA86	23145563	Switch, Push, 1C1P
SA87	23145563	Switch, Push, 1C1P
SA88	23145563	Switch, Push, 1C1P
SA89	23145580	Switch, Push
SA90	23145580	Switch, Push
SA91	23145563	Switch, Push, 1C1P
SA92	23145563	Switch, Push, 1C1P
SA98	23145747	Switch, Slide, 2C2P
SA99	23145747	Switch, Slide, 2C2P
△SR01	23146961	Relay, 2C, 1A, DC12V
△V901A	23116543	Socket, CRT, 8P
V901M	23102983	Purity/Conv. Magnet, MAG1008
W661	23151391	Speaker, SPK1133, 8 ohm
W662	23151391	Speaker, SPK1133, 8 ohm
XA01	23153949	Ceramic Resonator, 4MHz, TCR1003
XA02	23153969	Crystal, 4MHZ
XP01	23153901	Ceramic Resonator, TCR1009
XX01	23153902	Ceramic Resonator, TCR1008
XX02	23153899	Crystal, 14 MHz
XY01	23153004	Crystal, 3.58 MHz
XY21	23250933	Delay Line, TRF2058
Z101	23107865	PIF SAW Filter, F1802C
Z141	23107976	Ceramic Filter, TPS4.5MC2
Z601	23107920	Ceramic Phase Shifter, 4.5MHz
ZA02	24094863	Capacitor Block, 0.01 μ F \times 4
ZA03	24094834	Capacitor Block, 220pF \times 4
ZA04	24094834	Capacitor Block, 220pF \times 4
ZA05	24094863	Capacitor Block, 0.01 μ F \times 4
ZA06	24094834	Capacitor Block, 220pF \times 4
ZG01	23107884	Filter, TLC1030A
ZG02	23107883	Filter, TLC1030B
ZG03	23107851	Filter, TLC1051
ZG04	23107851	Filter, TLC1051
ZX01	24094742	Capacitor Block, 1000pF \times 4
ZX02	24094742	Capacitor Block, 1000pF \times 4
ZX03	23107847	Filter, TEM1000
ZX04	23107847	Filter, TEM1000
ZX05	23107847	Filter, TEM1000
ZX06	23107847	Filter, TEM1000
ZX07	23107847	Filter, TEM1000
PC BOARD ASSEMBLIES		
U001	23169748	Back Terminal Board, PW4522
U601	23169747	Front Terminal Board, PW4523
U801	23169746	Power Board, PW4524

LOCATION NUMBER	PART NUMBER	DESCRIPTION
U901	23169751	CRT Drive, PW4519
U902	23169731	Main Board, PW4535
UA01	23169729	Control/Key Board, PW4537
UG01	23158176	MCS-1 Board, PW4227
UG02	23169750	MCS-2 Board, PW4520
UR01	23169752	Remote Sensor Board, PW4518
UX01	23169730	Digital Board, PW4536

LOCATION NUMBER	PART NUMBER	DESCRIPTION
PICTURE TUBE		
△V901 E502	A5493039 23848729	Picture Tube, A51JAR60X(MW) Rubber Wedge, Yoke Holding
TUNER		
H001	23121779	Tuner, EL524FX2

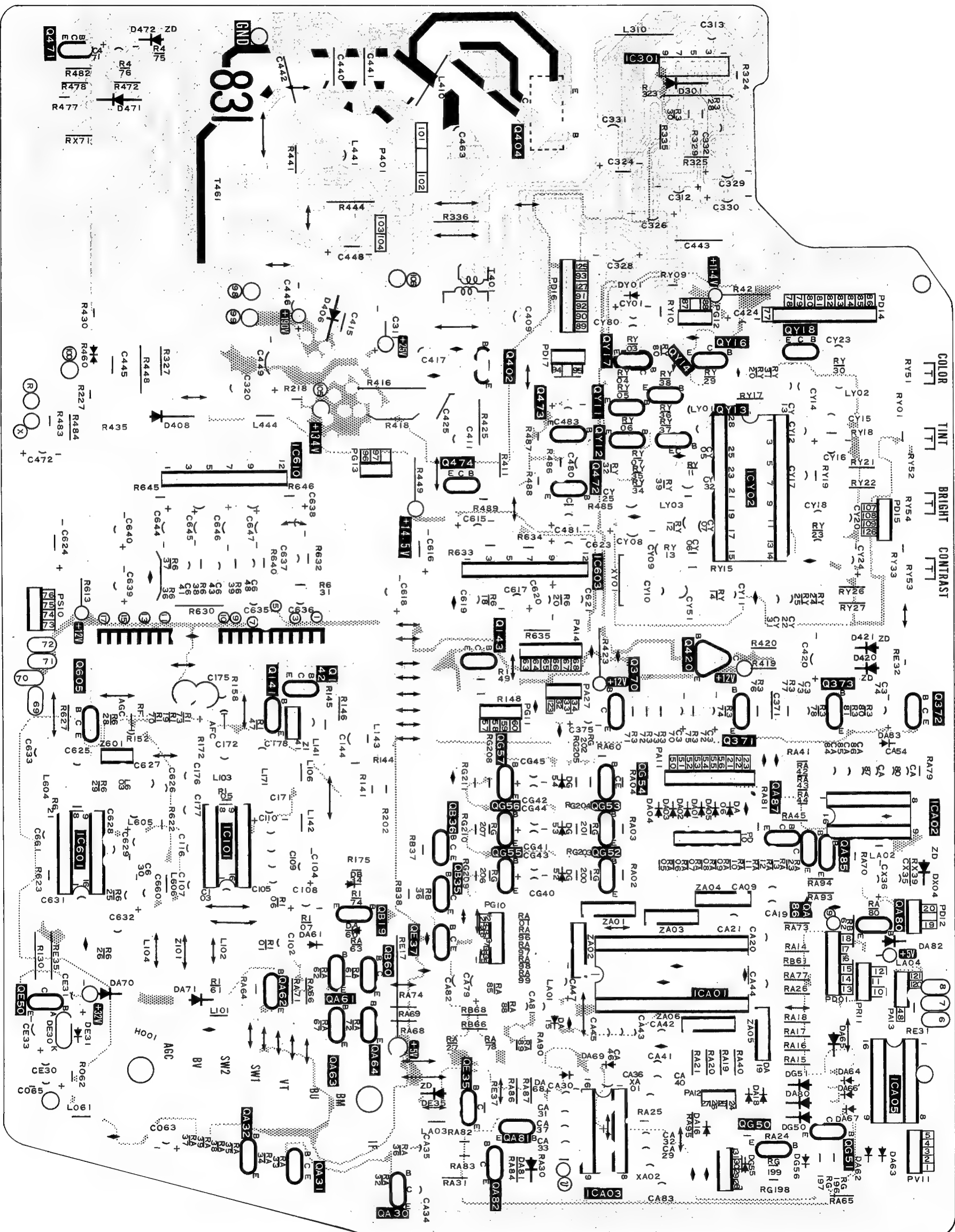
POWER BOARD (Foil Side)

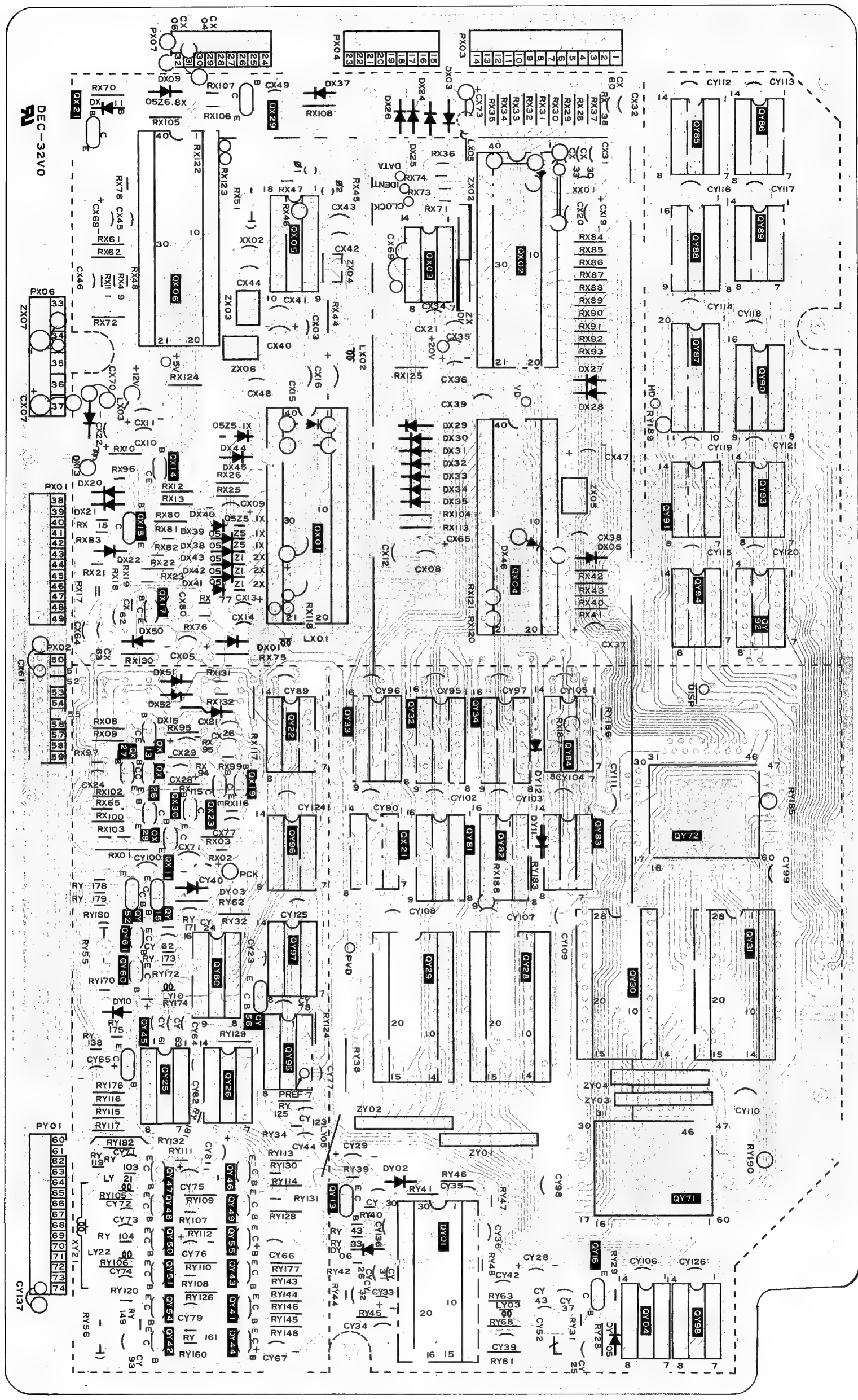
PW4524-1



PW4524-2
(Sub Unit)

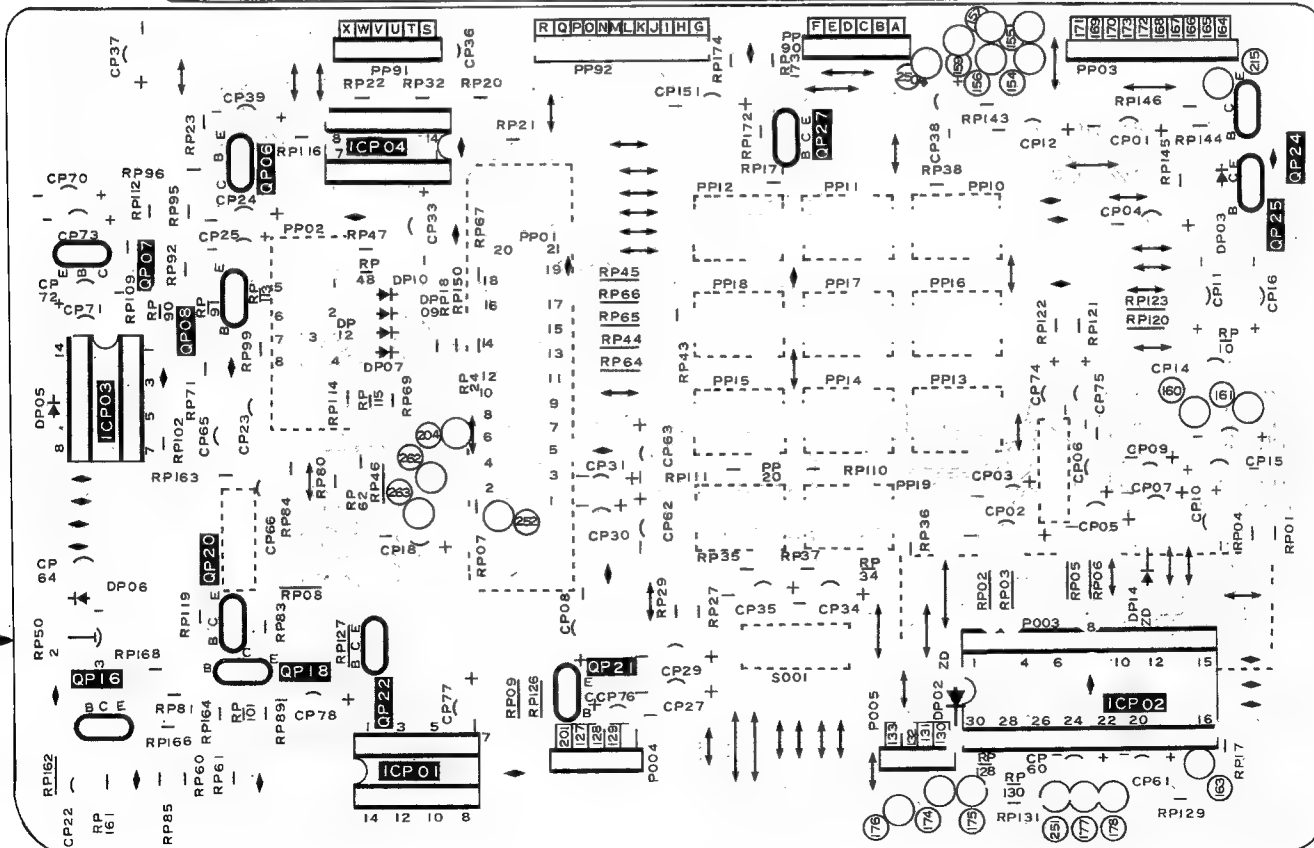
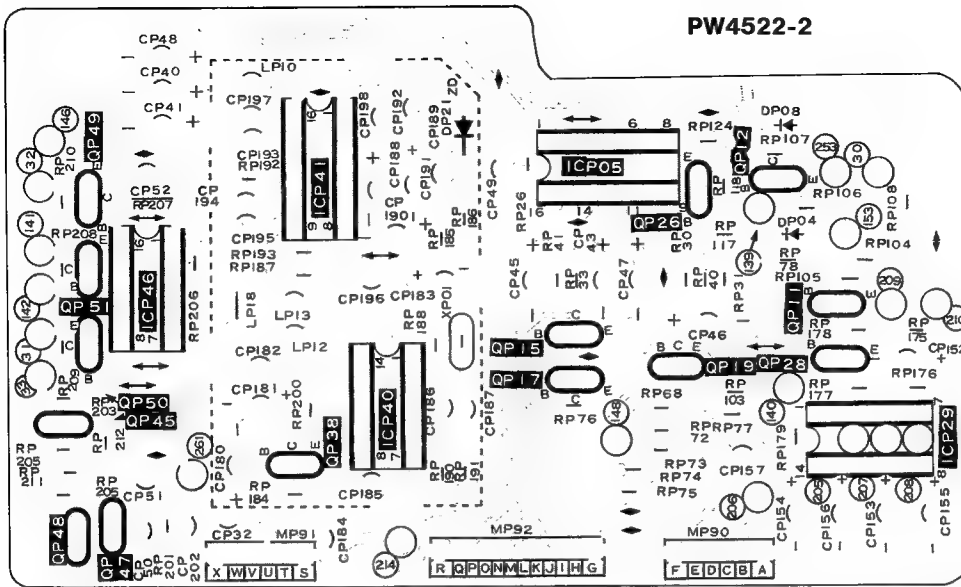
MAIN BOARD PW4535 (Foil Side)





BACK TERMINAL BOARD

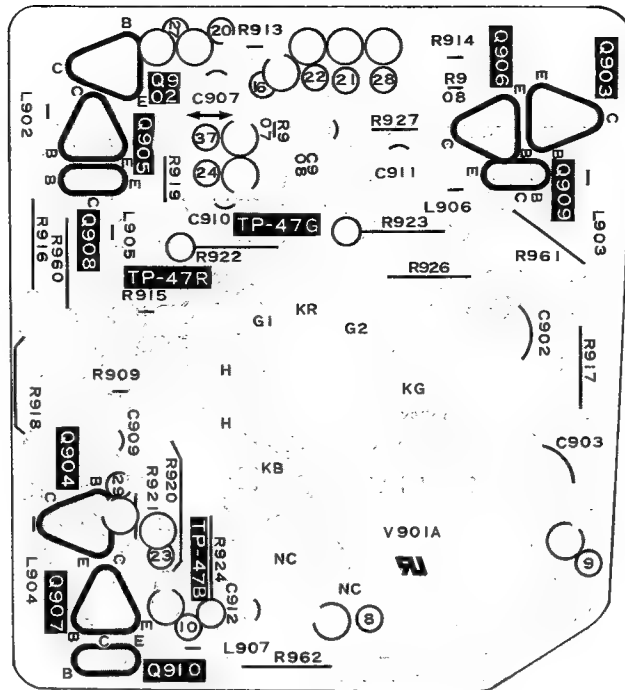
PW4522-2



PW4522-1

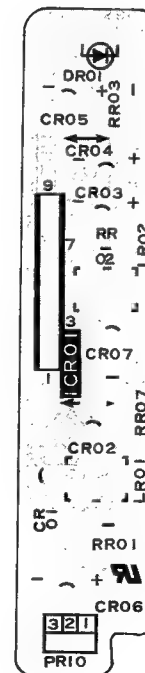
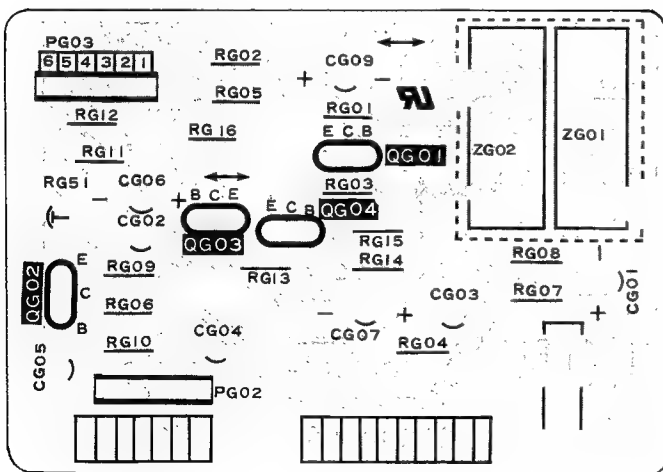
RP50 RGB SUB-BRIGHT

CRT DRIVE BOARD PW4519 (Foil Side)



**MCS-1 BOARD PW4227
(Foil Side)**

**REMOTE SENSOR BOARD
PW4518 (Foil Side)**



This manual is the latest at the time of printing, and does not include the modifications which may be made after the printing, by the constant improvement of product.

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